

**Floogie Mitigation Project  
Bertie County, North Carolina  
DENR-EEP Contract No. D06011  
Year 2 Monitoring Report**



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Appendix A	As-Built Survey
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Appendix C	2009 Gauge Data
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## **1.0 SUMMARY**

This Annual Report details the monitoring activities during the 2009 growing season on the Floogie Mitigation Site. Construction of the site, including planting of trees, was completed in February 2008. The 2009 data represents results from the second year of hydrology and vegetation monitoring for both wetlands and streams.

The design for the Floogie property involved stream restoration and riverine wetland restoration. After construction, it was determined that the project generated 11,149 feet of stream restoration and 25.19 acres of wetland restoration. The As-Built survey is included as Appendix A.

This Annual Report presents the data from 9 automated hydrology monitoring stations, 18 vegetation monitoring plots, two crest gauges, two rain gauges, 20 cross sections, a minimum of 3,100 linear feet of profile survey, and photographic reference locations, as specified in the approved Restoration Plan for the site.

Weather station data from the Windsor Weather Station were used in conjunction with manual and tipping bucket rain gauges located on the site to document precipitation amounts. The manual gauge is used to validate observations made at the automated stations. On-site rainfall measurements correlated with readings taken at the Windsor Weather Station throughout the growing season.

In 2009, all hydrology monitoring gauges met the 7 percent hydrologic success criterion as defined in the Restoration Plan for the site. The gauges exhibited hydroperiods ranging from 13 to 16 percent of the growing season.

This Annual Monitoring Report documents vegetation survival on 18 vegetation monitoring plots. The vegetation monitoring indicated survival rates between 340 and 980 stems per acre with an average of 655 stems per acre. The site is on track to achieve the interim vegetative success criteria of 320 surviving planted stems per acre at the end of year three of the monitoring period.

Four bankfull events were recorded at the site during the 2009 growing season from each crest gauge. The restored stream channel has remained stable and is providing the intended habitat and hydrologic functions. All monitored cross sections and longitudinal profile for 2009 show very little adjustment in stream dimension, with the exception of cross section 15.

## **2.0 INTRODUCTION**

### **2.1 PROJECT DESCRIPTION**

The Floogie site is located 9 miles northeast of Windsor (**Figure 1**). The property is 104 acres located immediately southwest of SR 1348 (Browns School Road) and is accessed via a farm road that runs adjacent to the channel (Flat Swamp Creek). Construction at the site was completed in February 2008. Groundwater, surface water, and rain gauges were functional beginning March 2008. The 2008 monitoring season represents Year 1 of monitoring for the site.

Flat Swamp Creek has a drainage area of 1,168 acres (1.83 mi<sup>2</sup>) at the upstream end of the restoration project and 2,150 acres (3.36 mi<sup>2</sup>) at the downstream end. The wetland restoration area has a drainage area of 1,456 acres (2.28 mi<sup>2</sup>). The dominant historic land use was

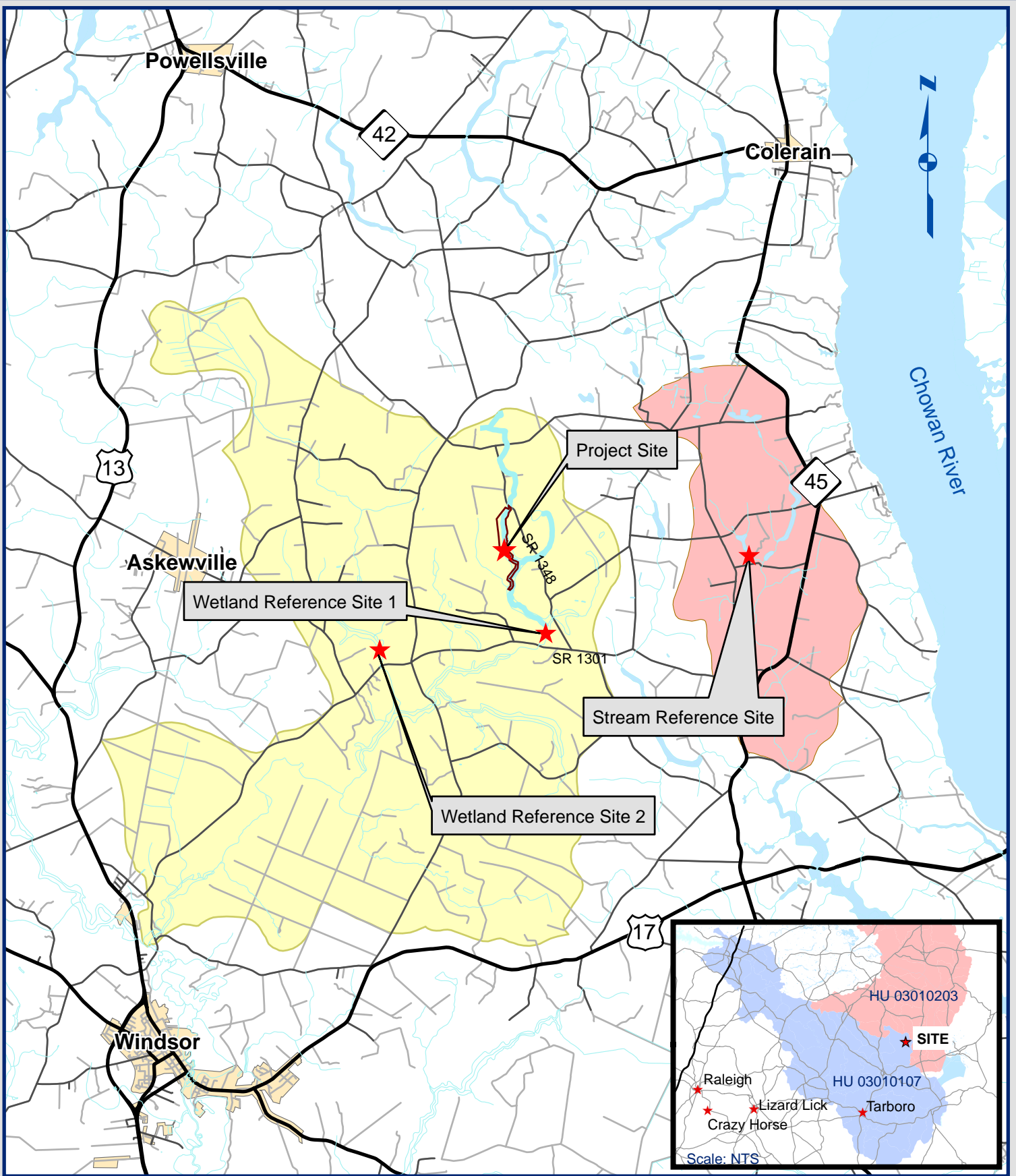




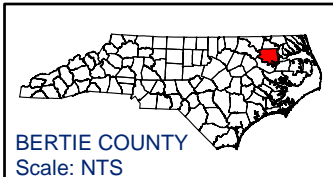


Figure 1.  
Project Vicinity Map  
Floodie Site

0 0.5 1 2 3 4 Miles

**LEGEND**

-  NCDOT Roads
-  Existing Waterbody
-  HUC 03010107160050
-  HUC 03010203090030



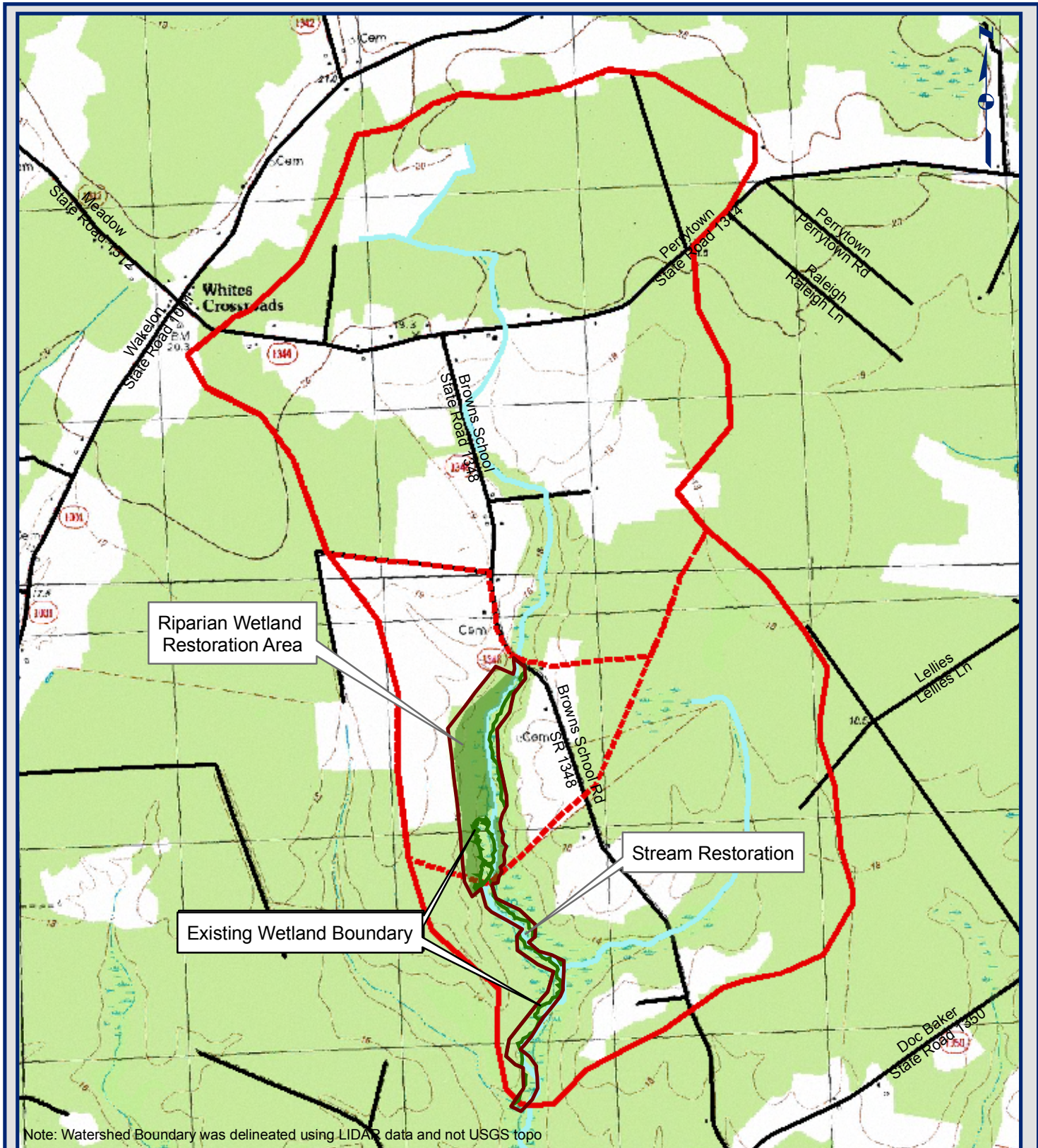
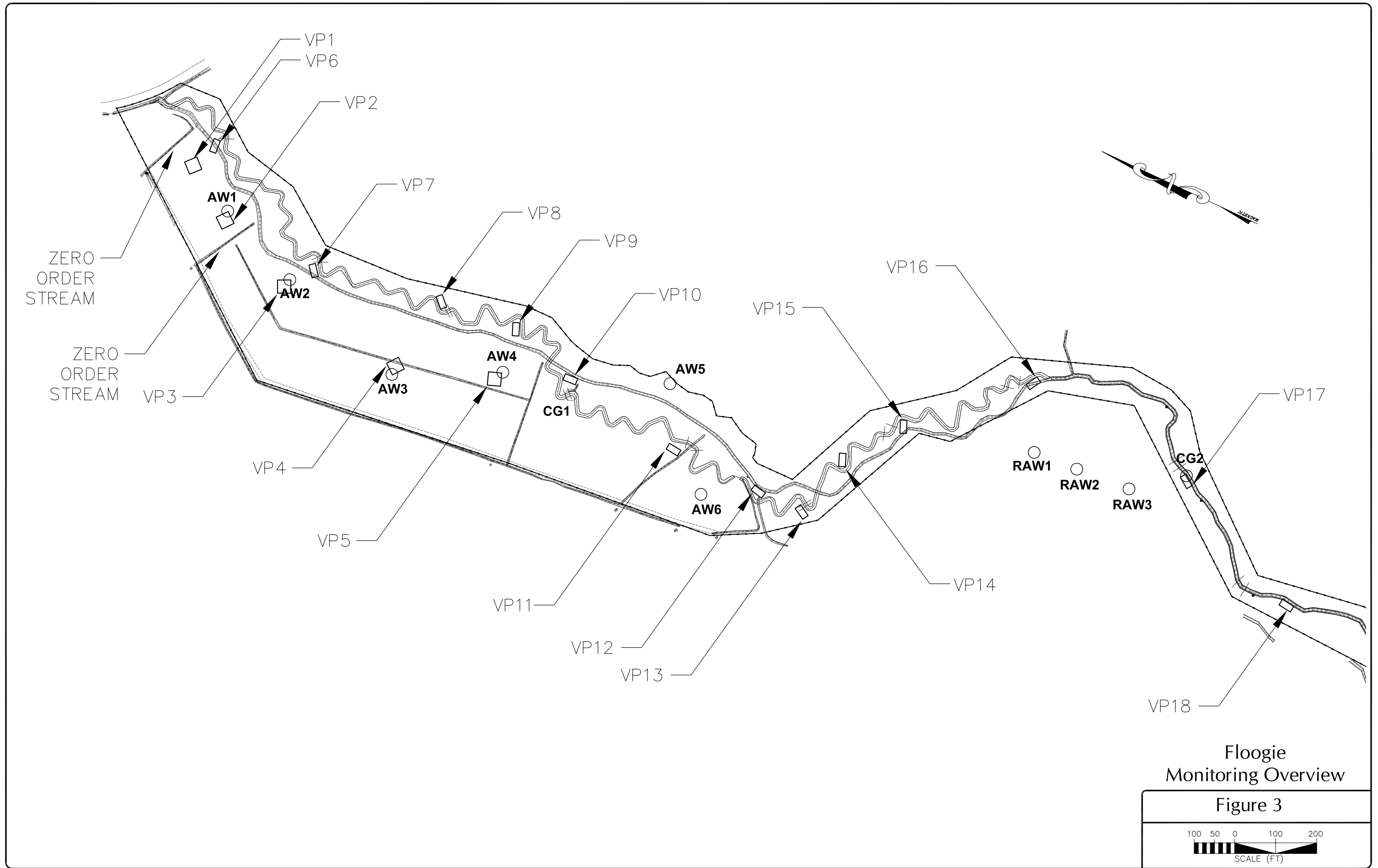


Figure 2.  
USGS Quadrangle Map  
Floodie Site

0 1,000 2,000 4,000  
Feet

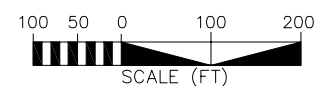
**LEGEND**

-  NCDOT Roads
-  Stream
-  Project Area
-  Potential Riverine Wetland Restoration
-  Watershed Boundary



Floogie  
Monitoring Overview

Figure 3



agricultural production of crops including cotton, soybeans, corn, and timber, although some areas were woodlands. Natural drainage patterns throughout the watershed had been historically altered to drain wetlands and promote agricultural production as seen on the USGS Merry Hill, NC topographic quadrangle (**Figure 2**). Numerous agricultural ditches had been constructed on the project site, and streams had been channelized to route water off the site, draining areas that were once wetland. The restoration areas are protected by a conservation easement.

## **2.2 PROJECT PURPOSE**

The objective of this project is to produce a minimum of 11,149 stream mitigation units (SMU) and 25.19 riverine wetland mitigation units (WMU) to the EEP through the full delivery process in the Lower Roanoke River 03010107 hydrologic unit, and to maximize the improvement of riparian and aquatic habitats and water quality through ecological restoration practices. Stream mitigation was provided through restoration on Flat Swamp Creek. Riverine wetland mitigation was provided through restoration. The site was identified and developed by EBX to support the NC EEP full delivery mitigation process. Monitoring of the Floogie Site is required to demonstrate successful mitigation based on the criteria found in the Restoration Plan and through a comparison to reference site conditions. The success criteria components will adhere to EEP and USACE guidelines. Hydrology, vegetation, and stream monitoring are conducted on an annual basis. This Annual Monitoring Report details the results of the monitoring efforts for 2009 (Year 2) at the Floogie Mitigation Site.

The as-built survey documented 11,149 linear feet of stream restoration (**Table 1**). Overbank stream flows will provide a portion of the hydrology for the wetlands. The wetland and stream restoration project will provide multiple ecological and water quality benefits within the Roanoke River Basin. Benefits include nutrient removal, sediment reduction, water storage, improved groundwater recharge, improved in-stream and riparian habitat, and restored wetland habitat. **Table 2** and **Table 3** list the project schedule and contacts, respectively.

**Table 1. Project Mitigation Structure and Objectives**

<b>Reach Name</b>	<b>As-Built Length (ft)</b>	<b>Restoration Approach</b>
<b>Stream</b>		
R1	2,800	Stream Restoration
R2	2,500	Stream Restoration
R3	2,400	Stream Restoration
R4	2,771	Stream Restoration
1A	322	Headwater Stream Restoration
1B	356	Headwater Stream Restoration
<b>Total</b>	<b>11,149</b>	
<b>Wetlands</b>		
	<b>25.19 ac</b>	Riverine Wetland Restoration



## 2.3 PROJECT HISTORY & SCHEDULE

**Table 2. Project Activity and Reporting History**

<b>Month</b>	<b>Activity</b>
October 2007	Construction Began
February 2008	Construction Completed
March 2008	Planting Completed
March 2008	Post Construction Monitoring Gauges Installed
April 2008	As-Built Report Submitted
August 2008	1st Annual Monitoring Report
September 2009	2nd Annual Monitoring Report
September August 2010	3rd Annual Monitoring Report (Scheduled)
September August 2011	4th Annual Monitoring Report (Scheduled)
September August 2012	5th Annual Monitoring Report (Scheduled)

**Table 3. Project Contacts**

<b>Contact</b>	<b>Firm Information</b>
<b>Project Manager</b> Norton Webster	EBX-Neuse 1, LLC (919) 608-9688
<b>Designer</b> Jeff Keaton, PE	WK Dickson and Co., Inc (919) 782-0495
<b>Monitoring Contractor</b> Daniel Ingram	WK Dickson and Co., Inc (919) 782-0495

## 3.0 HYDROLOGY

### 3.1 HYDROLOGIC SUCCESS CRITERIA

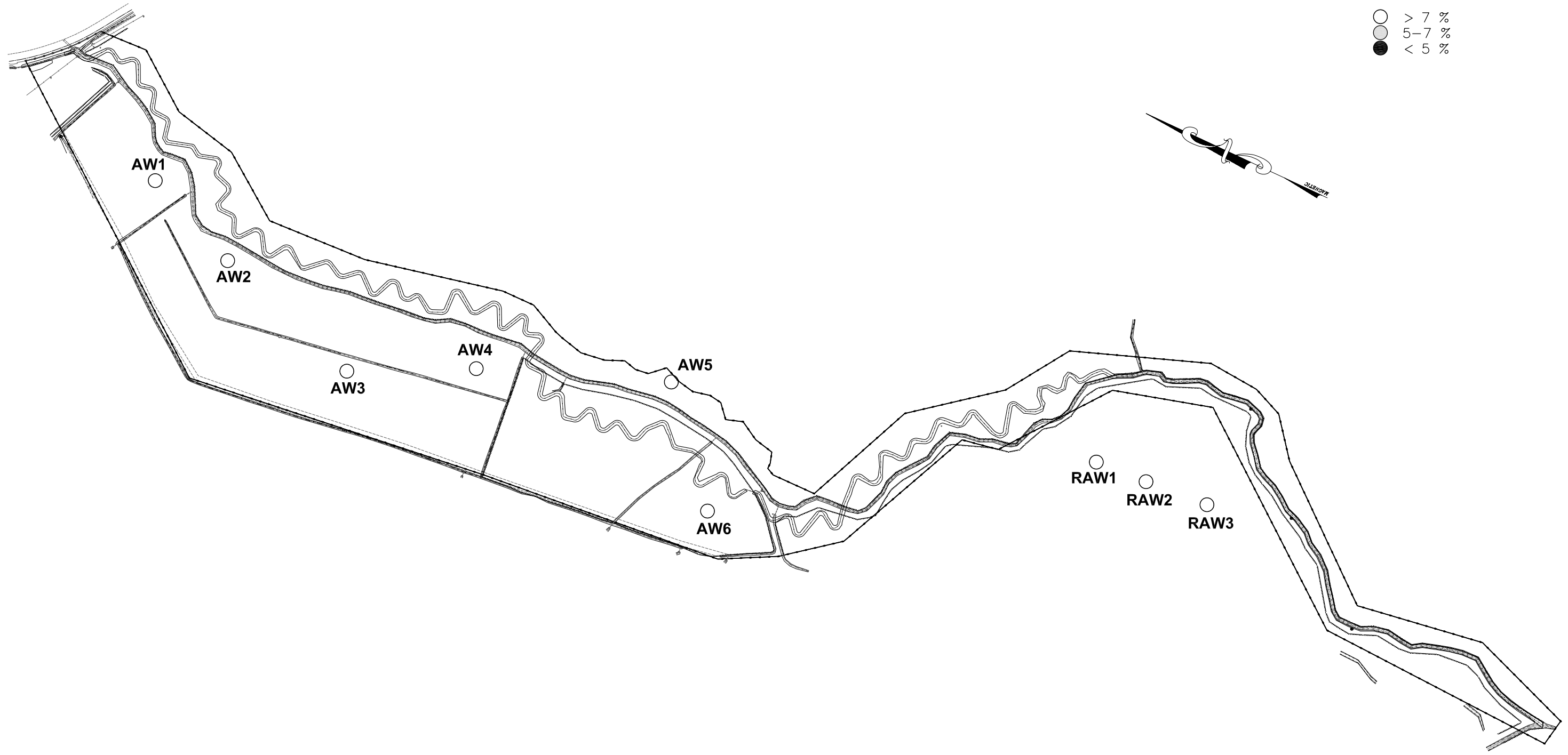
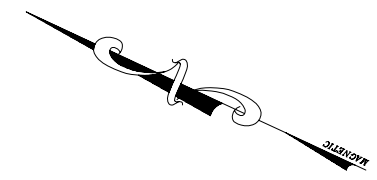
As stated in the Restoration Plan, the hydrology success criterion for the site is to restore the water table at the site so that it will remain within 12 inches of the soil surface for at least 7 percent of the growing season continuously (approximately 16 days). The growing season is from March 22 to November 8. Based on a daily minimum temperature greater than 28° Fahrenheit occurring in 5 of 10 years, the growing season for Bertie County is 232 days long. Gauge data will be compared to reference wetland well data in growing seasons with less than normal rainfall. In periods of low rainfall, if a restoration gauge hydroperiod exceeds the reference gauge hydroperiods and both exceed five percent of the growing season, then the gauge will be deemed successful. The results of hydrology monitoring across the wetland restoration site are presented in this annual monitoring report.

### 3.2 DESCRIPTION OF HYDROLOGY MONITORING EFFORTS

Six automated HOB0 groundwater gauges, one manual rain gauge, and one tipping bucket rain gauge were installed prior to the beginning of the first growing season (**Figure 3**). Three additional automated groundwater gauges were installed in a reference wetland. Groundwater gauges were installed to a minimum depth of 40 inches below the ground surface. The monitoring protocol for the site specifies that automated monitoring stations will be downloaded and checked for malfunctions on a monthly basis. During monthly site visits, each groundwater gauge is downloaded and rainfall totals are collected from the on-site rain gauge. During the 2009 growing season, all nine automated data loggers performed as expected, and no periods of missing data were encountered.

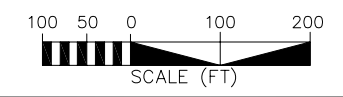
WETLAND HYDROPERIOD

- > 7 %
- ◐ 5-7 %
- < 5 %



Flogie  
Hydrologic Success

Figure 4



*Automated Gauges*

Automated groundwater gauges record water table elevations four times daily at 06:00, 12:00, 18:00, and 24:00. These automatic gauges employ pressure sensors that record water elevation above the bottom of the sensor (with atmospheric pressure compensation). The calibration water table depth is recorded at monthly downloads. To determine wetland hydroperiods, the automatically recorded data are compared to the calibration data to determine a standard correction factor between the calibration gauge and the automatic gauge for each location. The standard correction factor is applied to correct daily readings. The corrected daily readings are then used to determine wetland hydroperiods.

*Data Interpretation*

Wetland hydroperiods are calculated for four daily water table depth elevations. A hydroperiod is calculated if the water table is equal to or less than 12 inches below ground surface for at least 24 hours. If a gauge falls below -12 inches for two consecutive readings (24 hours) then the hydroperiod ends at the last reading within 12 inches of the ground surface. If a gauge falls below -12 inches for only one reading then maintains a reading above -12 inches for a minimum of 24 hours, the hydroperiod is calculated continuously. This methodology accounts for minor anomalies experienced by the automatic gauges.

**3.3 RESULTS OF HYDROLOGY MONITORING**

The following hydroperiod statistics were calculated for each monitoring station during the growing season: 1) most consecutive days that the water table was within twelve inches of the surface; 2) cumulative number of days that the water table was within twelve inches of the soil surface; and 3) number of times that the water table rose to within twelve inches of the soil surface (**Table 4**). Depth of groundwater for each of the monitoring gauges is shown in a graph with precipitation (**Figures 5a-5c**). This hydrograph demonstrates the reaction at each monitoring location of the groundwater level to specific rainfall events. Raw hydrograph data collected from the monitoring gauges is provided in **Appendix C**.

**Table 4. Hydrologic Monitoring Results**

<b>2009 Max Hydroperiod (Growing Season 22-Mar through 8-Nov, 231 days)</b>					
<b>Gauge</b>	<b>Consecutive</b>		<b>Cumulative</b>		<b>Occurrences</b>
	<b>Days</b>	<b>Percent of growing Season</b>	<b>Days</b>	<b>Percent of growing Season</b>	
<b>AW1</b>	37	16%	76	33%	7
<b>AW2</b>	36	15%	62	27%	7
<b>AW3</b>	33	14%	48	21%	7
<b>AW4</b>	37	16%	61	27%	6
<b>AW5</b>	37	16%	46	20%	2
<b>AW6</b>	36	15%	45	19%	3
<b>RAW1</b>	38	16%	46	20%	2
<b>RAW2</b>	31	13%	35	15%	4
<b>RAW3</b>	30	13%	33	14%	3

The site was designed to function as a riparian wetland system with associated wet flats. Hydrology in the riparian areas is driven primarily by over bank flooding, while precipitation is the primary hydrologic influence in wet flat areas. Model simulations performed during the design phase of the project indicate that the water table will draw down from April through July; however, the restored channel will maintain an elevated water table throughout the floodplain

area year-round. The data collected for the 2009 growing season for this site indicate that it is performing as described in the Mitigation Plan, with all monitoring stations exceeding the hydrology success criteria.

### 3.3.1 Site Data

Year 2 monitoring demonstrates that most of the site is functioning as designed, with varying degrees of wetness and saturation across the site. All six automated gauges exceeded the 7 percent hydrologic success criterion. All reference gauges also exceeded the 7 percent hydrologic success criteria.

Figure 5a. Groundwater Gauges

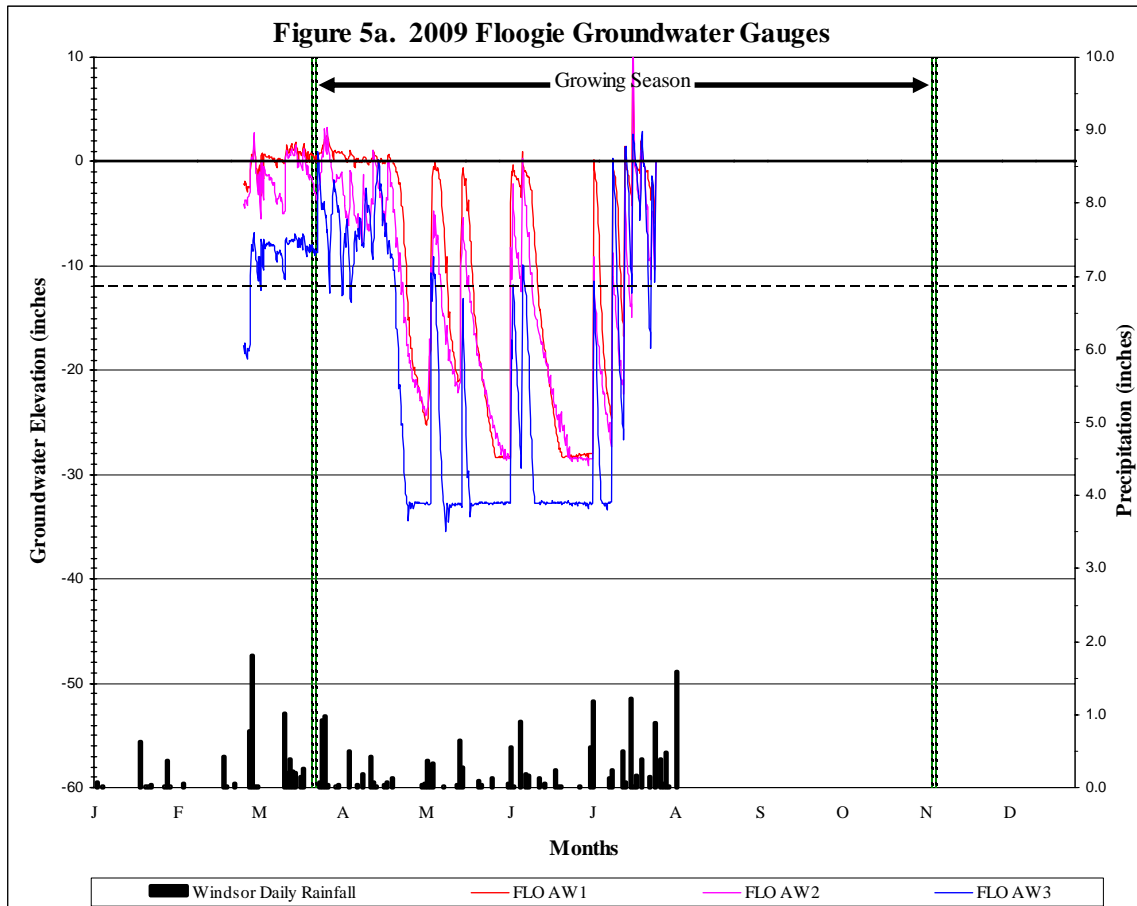
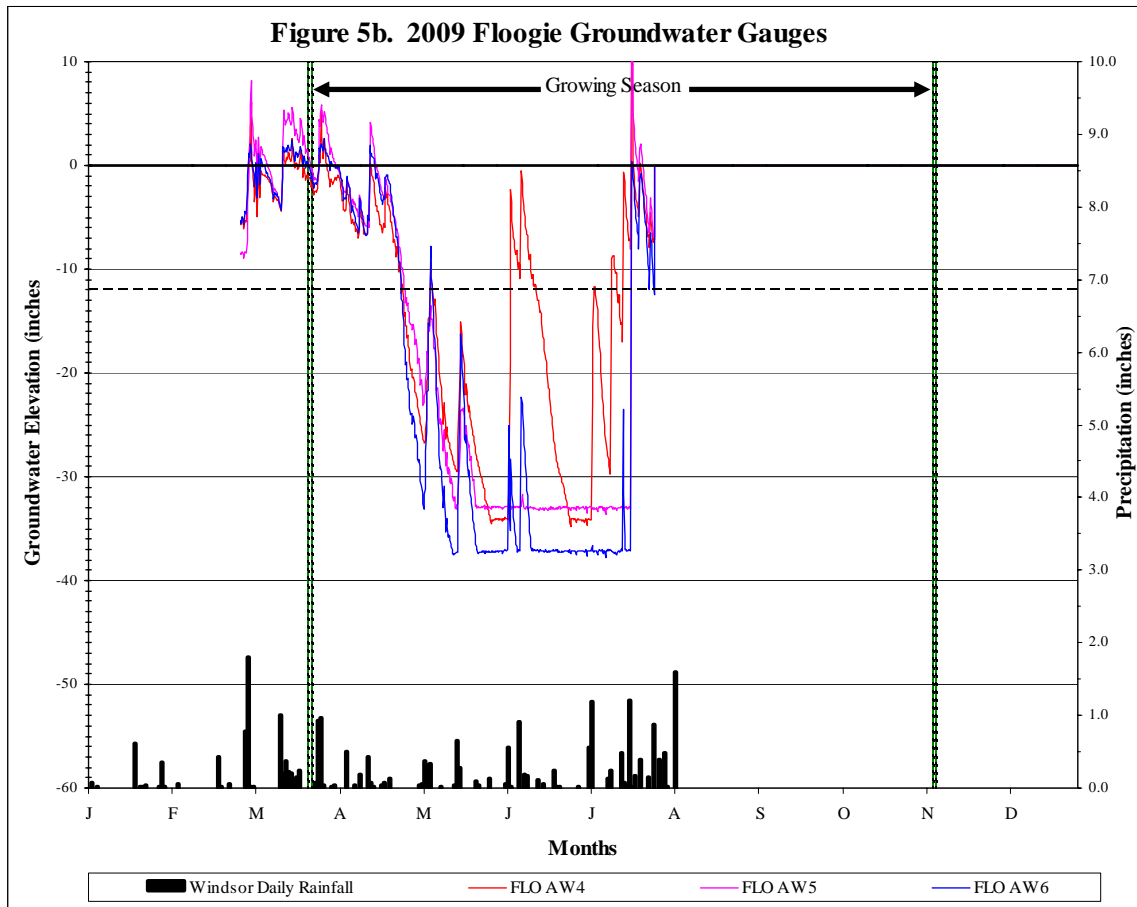
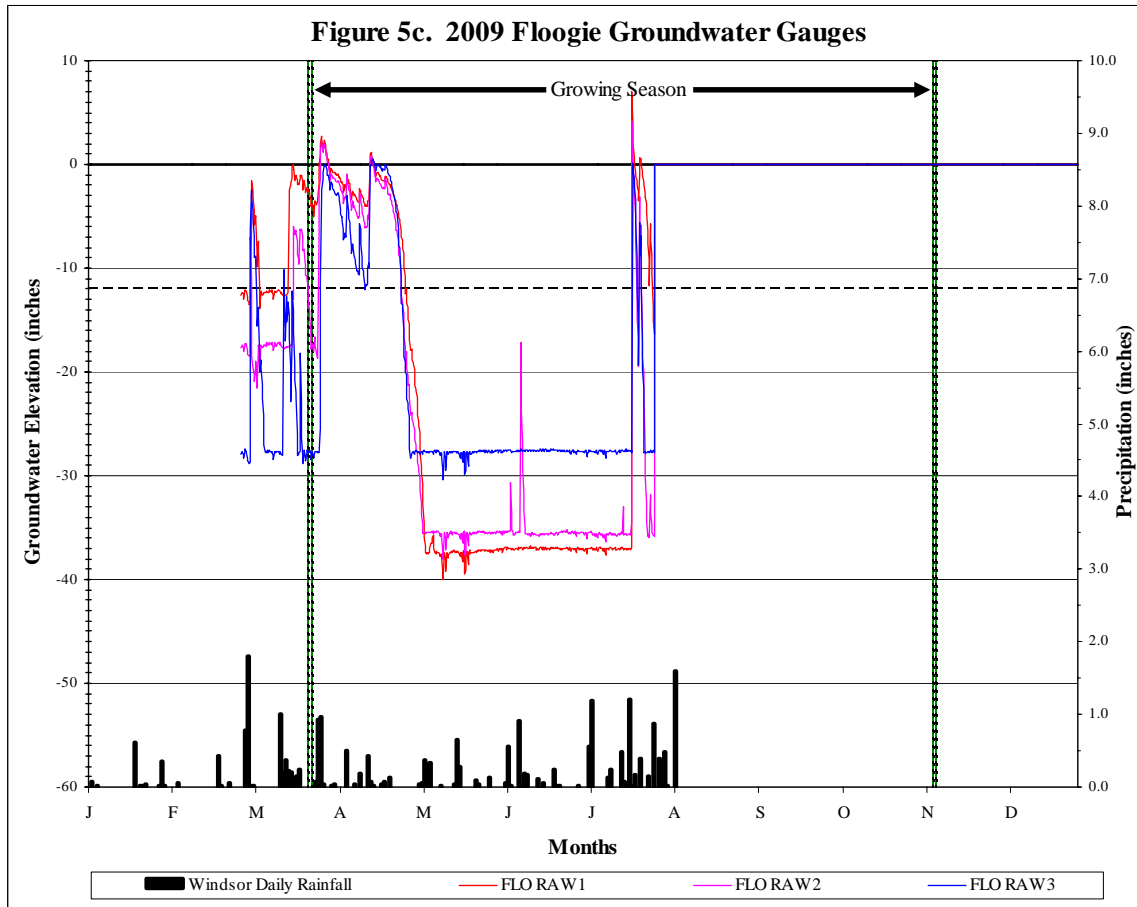


Figure 5b. Groundwater Gauges



**Figure 5c. Groundwater Gauges**



**3.3.2 Reference Data**

The approved Mitigation Plan provides that if the rainfall data for any given year during the monitoring period is not normal, the reference wetland data can be accessed to determine if there is a positive correlation between the performance of the restoration site and the natural hydrology of the reference site. 2009 rainfall was within normal limits. Therefore wet

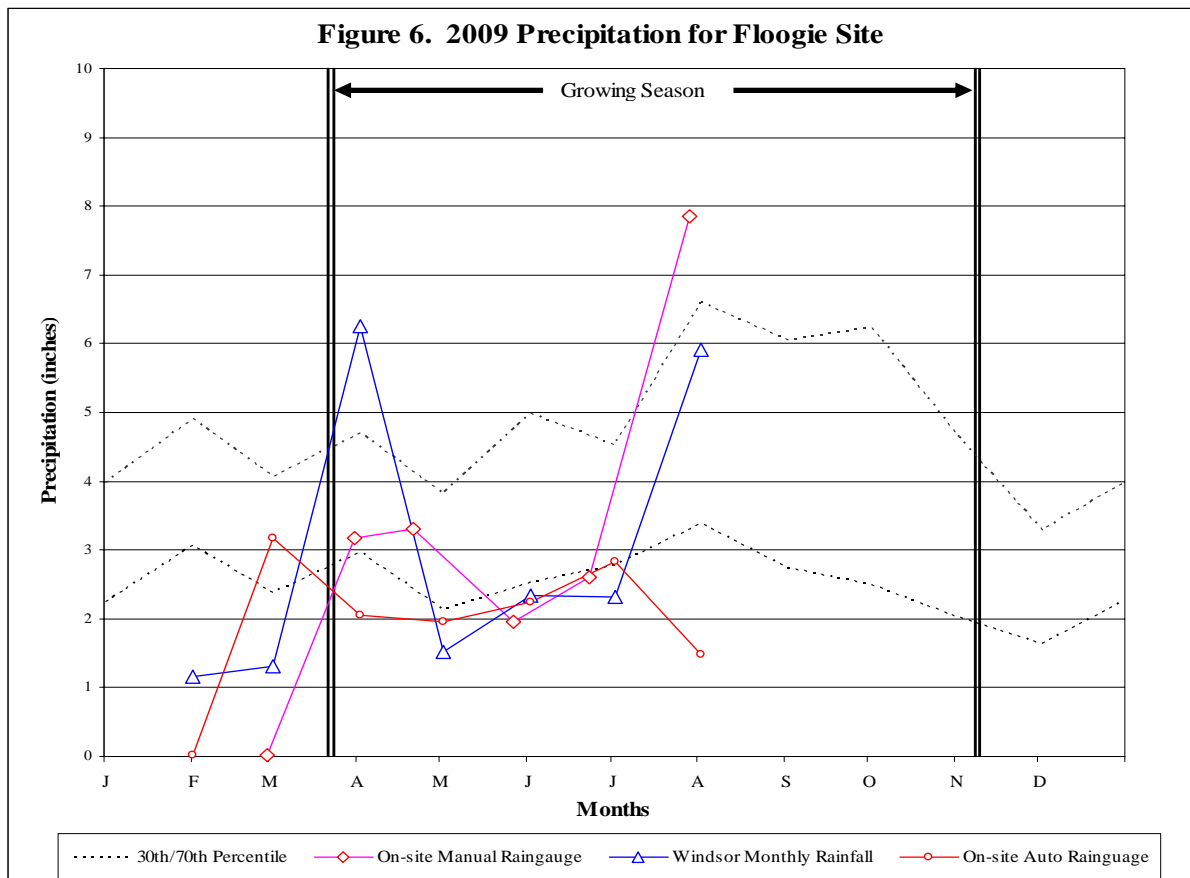
**3.3.3 Climate Data**

**Table 5** and **Figure 6** compare the 2009 monthly rainfall to historical precipitation for Bertie County. Observed precipitation data were collected from an automated weather station in Windsor (Bertie County). The rainfall total from the gauge was within normal limits for the growing season. Rainfall was slightly below normal limits in February, March, and May; and exceeded normal limits in the remaining months. Monthly rainfall data for August 2009 were not available at the time this report was compiled. The onsite manual rain gauge was damaged by inclement weather during the months of February and March. Data for these months were substituted with data from an onsite automatic tipping bucket rain gauge (**Table 5**).

**Table 5. Comparison of Normal Rainfall to Observed Rainfall**

Month	Average	Normal Limits		Windsor Precipitation	Manual Rain Gauge Precipitation	Tipping Bucket Precipitation
		30 Percent	70 Percent			
January	4.11	3.07	4.90	1.16	---	---
February	3.37	2.38	4.07	1.32	---	1.15
March	3.98	2.96	4.70	6.25	---	4.07
April	3.00	2.12	3.82	1.53	3.30	1.95
May	3.99	2.53	4.98	2.34	1.95	2.24
June	3.87	2.78	4.53	2.32	2.60	2.84
July	5.37	3.39	6.59	5.91	7.85	1.48
August	4.86	2.74	6.04			
September	5.10	2.50	6.24			
October	3.23	2.02	4.63			
November	2.71	1.63	3.28			
December	3.30	2.24	3.97			
<b>Average</b>	<b>---</b>	<b>30.36</b>	<b>57.75</b>	<b>---</b>	<b>---</b>	<b>---</b>
<b>Total</b>	<b>46.89</b>	<b>---</b>	<b>---</b>	<b>20.83</b>	<b>15.70</b>	<b>13.73</b>

**Figure 6. 2009 Precipitation Comparison**



### 3.4 HYDROLOGIC CONCLUSIONS

Data collected from the groundwater monitoring gauges on the Floogie Mitigation Site in 2009 indicate that all of the hydrology monitoring stations recorded hydroperiods of at least 7 percent of the growing season. Thus, all the hydrology monitoring stations meet the hydrologic success criterion for 2009.

Windsor weather station rainfall data indicates that the 2009 growing season rainfall amounts were normal to above normal for most of the growing season, except for March, when rainfall levels were slightly below normal.

## 4.0 VEGETATION

### 4.1 VEGETATION SUCCESS CRITERIA

Successful establishment of vegetation in wetland restoration and riparian areas will be the survival of 260 planted stems following Year 5 monitoring. The site must also meet the interim success criterion of the survival of at least 320 planted stems per acre at the end of the Year 3 monitoring period. Up to 20 percent of the site species composition may be comprised of non-invasive volunteers. Remedial action may be required should volunteers present a problem or exceed 20 percent composition.

A digital image photo log will be used to subjectively evaluate the restoration site over time. A series of images over the five year monitoring period should demonstrate maturation of planted vegetation and volunteer hydrophytic species.

### 4.2 DESCRIPTION OF SPECIES AND VEGETATION MONITORING

Eighteen semi-permanent vegetation sampling plots were established within the planted restoration areas to monitor the success of planted vegetation. The wetland vegetation plots are 0.10 acres in size (Plots 1 through 5), and the riparian vegetation plots are 0.05 acres in size (Plots 6-through 18). The vegetation plots are distributed across the site, but the precise location and orientation of the plots was random (see locations on as-built drawings in **Appendix A**). The plots cover approximately two percent of the restored site. Ten tree species were planted on the site (**Table 6**).

**Table 6. Planted Tree Species**

Common Name	Scientific Name	FAC Status
Bald Cypress	<i>Taxodium distichum</i>	OBL
Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
Laurel Oak	<i>Quercus laurifolia</i>	FACW-
Loblolly Pine	<i>Pinus taeda</i>	FACW
River Birch	<i>Betula nigra</i>	FACW
Swamp blackgum	<i>Nyssa biflora</i>	OBL
Swamp Chestnut Oak	<i>Quercus michauxii</i>	FACW-
Water Oak	<i>Quercus nigra</i>	FACW-
Water Tupelo	<i>Nyssa aquatica</i>	OBL
Willow Oak	<i>Quercus phellos</i>	FACW-

All of the planted stems inside each plot were flagged with orange or pink flagging to help in locating them in the future. Each stem is tagged with a sequentially numbered aluminum tag.



**4.3 RESULTS OF VEGETATION MONITORING**

Stem counts for each of the 18 monitoring stations are presented by species in **Table 7**. Water tupelo counts may also include swamp blackgum as these two similar species are difficult to accurately distinguish at the small seedling stage. One hickory stem was recorded and most likely resulted from an errant stem included from the nursery. A few of the numbered tags have been lost or damaged, mostly on smaller stems. This may be due small animal theft or to tags being washed over small stems during flooding after planting.

**Table 7. Results of 2009 Vegetation Monitoring – Planted Species by Plot**

Species	Plots																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Bald Cypress	7	11	3	22	7	8	4	13	4	9	12	4	11	9	11	4		2
Green Ash	5	11	27	3	19		7	7	4	1	3	17	2	6	4	7	2	4
Hickory		1																
Laurel Oak	1	1		1						1		1	2			8		
Overcup Oak	11	11	16	10	7	3	2	7	9	4	6	4	9	8	1	6		4
Swamp Tupelo	20	14	13	21	10	7	2	9	5	9	8	9	6	10	14	12	12	8
Willow Oak	9		6	4	10	6	2	7	6	25	6	7	7	5	11	4	14	8

Most of the planted stems are healthy with recent growth. The planted stems in the monitoring plots ranged from 340 to 980 stems per acre with an average of 655 stems per acre (**Table 8**). The plots are on track to meet the minimum criteria of 320 stems per acre after three years. Remedial action of replanting around Plot 7 may be considered if Year 3 survival is below 320 trees per acre.

**Table 8. Summary of Results**

<b>Plot #</b>	<b>As-Built Stems Planted</b>	<b>Stems Year 1</b>	<b>Stems Year 2</b>	<b>Stems per Acre Year 2</b>
Plot 1	61	55	53	530
Plot 2	60	46	49	490
Plot 3	70	66	65	650
Plot 4	69	58	61	610
Plot 5	65	57	53	530
Plot 6	40	31	24	480
Plot 7	37	22	17	340
Plot 8	49	44	43	860
Plot 9	45	33	28	560
Plot 10	50	48	49	980
Plot 11	47	36	35	700
Plot 12	45	43	42	840
Plot 13	40	39	37	740
Plot 14	51	47	38	760
Plot 15	48	43	41	820
Plot 16	49	48	41	820
Plot 17	30	28	28	560
Plot 18	28	27	26	520
			<b>Average</b>	<b>655</b>
			<b>Range</b>	<b>340-980</b>

The most commonly found volunteer species within the plots were also monitored to determine composition and potential effect on success criteria (**Table 9**). Volunteer stems are limited in most plots and represent many species. Nearly all of the seedlings are small and do not present any competition problems at this time. The most common appear to be species having high seed production and good dispersal and include eastern baccharis (*Baccharis halimifolia*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), and winged sumac (*Rhus copallina*).

**Table 9. Common Volunteer Woody Species**

Common Name	Scientific Name	FAC Status
Red Maple	<i>Acer rubrum</i>	FAC
Winged Sumac	<i>Rhus copallinum</i>	NI
Eastern Baccharis	<i>Baccharis halimifolia</i>	FAC
Sweetgum	<i>Liquidambar styraciflua</i>	FAC+
Elderberry	<i>Sambucas canadensis</i>	FACW-
Tuliptree	<i>Liriodendron tulipifera</i>	FAC
Common Buttonbush	<i>Cephalanthus occidentalis</i>	OBL
Overcup Oak	<i>Quercus lyrata</i>	OBL
Laurel Oak	<i>Quercus laurifolia</i>	FACW
Black Cherry	<i>Prunus serotina</i>	FACU
Hickory	<i>Carya</i> sp.	---
Privet	<i>Ligustrum sinense</i>	FAC
Black Gum	<i>Nyssa sylvatica</i>	FAC
Water Oak	<i>Quercus nigra</i>	FAC
Swamp Chestnut oak	<i>Quercus michauxii</i>	FACW-
Green Ash	<i>Fraxinus pennsylvanica</i>	FACW
Titi	<i>Cyrilla racemiflora</i>	FACW
Persimmon	<i>Diospyros virginiana</i>	FAC
Coastal Sweetpepperbush	<i>Clethra alnifolia</i>	FACW

A visual estimate of herbaceous vegetation cover was provided to assess the overall stability of the site (**Table 10**). The herbaceous cover is typically dense across most of the site. Many of the plots retain a variety of weedy species, but hydrophytic species are increasingly common. The most common species is common rush (*Juncus effusus*). The other most frequently occurring species are Canada goldenrod (*Solidago canadensis*) and dog fennel (*Eupatorium capillifolium*). Other species recorded include annual ragweed (*Ambrosia artemisiifolia*), beaked panicgrass (*Panicum anceps*), blackberry (*Rubus argutus*), deer tongue (*Dichanthelium clandestinum*), Japanese honeysuckle (*Lonicera japonica*), primrose-willow (*Ludwigia* sp), and sedge (*Carex* sp.). The herbaceous vegetation does not appear to be presenting any problems with survival or growth at this time. Trumpet creeper (*Campsis radicans*) is starting to cover some planted woody stems in the area around plots 7 and 9, and may become a problem in the future.

**Table 10. Estimated Herbaceous Total Percent Cover**

Plot Number	Estimated Percent Cover
1	97 %
2	95 %
3	92 %
4	92 %
5	98 %
6	96 %
7	97 %
8	75 %
9	96 %
10	97 %
11	90 %
12	93 %
13	92 %
14	90 %
15	98 %
16	98 %
17	98 %
18	93 %

The invasive species Chinese privet (*Ligustrum sinesense*) and Japanese honeysuckle (*Lonicera japonica*) were observed in a few plots. The occurrences of these species are typically associated with the adjacent existing populations of these invasive species and are from regenerating root sprouts and seeds. These species may displace desirable vegetation and should continue to be assessed in successive monitoring years. No remedial actions are recommended at this time.

#### **4.4 VEGETATION OBSERVATIONS & CONCLUSIONS**

Hydrophytic herbaceous vegetation is found across the entire site. coastal sweetpepperbush (*Clethra alnifolia*), common rush, primrose-willow (*Ludwigia* sp.), deertongue (*Dichantheium clandestinum*), giant cane (*Arundinaria gigantea*), lizard's tail (*Saururus cernuus*), Pennsylvania smartweed (*Polygonum pennsylvanicum*), sedges (*Carex* sp.), and trumpet creeper (*Campsis radicans*), all hydrophytic herbaceous plants, are observed across the site, particularly in areas of periodic inundation. The presence of these herbaceous wetland plants helps to confirm the presence of wetland hydrology on the site.

Weedy species occur throughout the site, and are quite dense in some areas. The presence of this weedy vegetation is a result of the seed bank from previous cultivation practices but has decreased. The weedy vegetation does not seem to be posing any wide spread problems for the planted stems at this time. Trumpet creeper is starting to cover some planted woody stems and may become a problem in the future. The invasive species Chinese privet and Japanese honeysuckle were observed in a few plots, and, although not currently a problem, these species may displace desirable vegetation. Invasive species should continue to be evaluated within the entire easement to ensure that these species do not become a concern for the site.

For the 2009 monitoring year, the average number of stems per acre on site is 655, and the range of stem density was 340 to 980 stems per acre. Plot 7 has 340 stems per acre. Plot 7 is not typical of the site. The site as a whole is on track to meet the minimum success interim criteria of 320 stems per acre by the end of year three.

## **5.0 STREAM MONITORING**

### **5.1 STREAM SUCCESS CRITERIA**

As stated in the approved Mitigation Plan, the stream restoration success criteria for the site includes the following:

- *Bankfull Events*: Two bankfull flow events must be documented within the five-year monitoring period.
- *Cross-Sections*: There should be little change in as-built cross sections. Cross sections shall be classified using the Rosgen stream classification method and all monitored cross-sections should fall within the quantitative parameters defined for "E" or "C" type channels.
- *Longitudinal Profiles*: The longitudinal profiles should show that the bedform features are remaining stable, e.g. they are not aggrading or degrading. Bedforms observed should be consistent with those observed in "E" and "C" type channels.
- *Photo Reference Stations*: Photographs will be used to subjectively evaluate channel aggradation or degradation, bank erosion, success of riparian vegetation and effectiveness of erosion control measures.
- *Benthic Macroinvertebrates*: Sampling of benthic macroinvertebrates within the restored stream channel shall be conducted in Year 1, Year 3, and Year 5 of post-restoration monitoring.

### **5.2 STREAM MORPHOLOGY MONITORING PLAN**

The stream monitoring program will be implemented to document system development and progress toward achieving the success criteria. The monitoring program will be undertaken for 5 years or until the final success criteria are achieved, whichever is longer.

#### **5.2.1 Cross Sections**

Two permanent cross sections will be installed per 1,000 linear feet of stream restoration work, with one located at a riffle and one located at a pool. Each cross section will be marked on both banks with permanent pins to establish the exact transect used. A common benchmark will be used for cross sections to facilitate easy comparison of year-to-year data. The annual cross-section survey will include points measured at all breaks in slope, including top of bank, bankfull, inner berm, edge of water, and thalweg, if the features are present. Riffle cross sections will be classified using the Rosgen stream classification system.

#### **5.2.2 Longitudinal Profile**

A longitudinal profile will be measured annually throughout the five-year monitoring period. The profile will be measured along a representative length of restored channel. Measurements will include thalweg, water surface, bankfull, and top of low bank. Each of these measurements will be taken at the head of each feature, for example, shallow, pool, and the max pool depth. The survey will be tied to a permanent benchmark.

#### **5.2.3 Hydrology**

The occurrence of bankfull events within the monitoring period will be documented by the use of a crest gauge and photographs. The two crest gauges will record the highest watermark between site visits, and the gauge will be checked monthly to document high flows. Digital images will be used to document the occurrence of debris lines and sediment deposition on the floodplain during monitoring site visits. In addition, the flow observations will be recorded for the headwater

stream restoration. These may include wrack lines, direct observations, dye tests, or other direct or indirect observations of flow.

#### **5.2.4 Photo Reference Stations**

Photographs will be used to subjectively evaluate channel aggradation or degradation, bank erosion, success of riparian vegetation and effectiveness of erosion control measures.

### **5.3 STREAM MORPHOLOGY MONITORING RESULTS**

**Table 11** presents stream areas that may require further observation. Overall, the channel is stable with a few areas of minor erosion.

#### **5.3.1 Hydrology**

Through the months of February to July, four bankfull events were documented during site visits through the use of the onsite crest gauges (**Table 12**). The largest stream flow recorded on the upstream crest gauge (CG1) was 1.25 feet above bankfull elevation. The largest stream flow recorded on the downstream crest gauge (CG2) was 1.60 feet above bankfull elevation. Both of these readings were taken during the July 2009 on-site visit.

Flow was observed in both headwater streams during the July 2009 on-site visit. Wrack lines of approximately 0.5 feet were also observed in areas directly adjacent to these headwater streams.

#### **5.3.2 Cross Sections**

Year 2 cross section monitoring data for stream stability were collected during July 2009 and compared to baseline data collected in March 2008, as well as Year 1 cross section data (**Table 13; Appendix B and E**). All monitored cross sections were stable and showed little change in channel dimensions, with the exception of some minor downcutting occurring at cross section 15. This is due to an increase in flow velocities that resulted from an improperly functioning rock weir just downstream.

#### **5.3.3 Longitudinal Profile**

A longitudinal profile survey was conducted in Year 2. Coastal plain swamp streams are dynamic in nature, and some channel adjustment is expected. Overall, the profile survey indicated little change to channel dimensions (**Table 13; Appendix B and E**). A rock weir in reach 3 (approximately station 76+70) is starting to fail, causing a headcut to work its way upstream and into cross section 15.

**Table 11. Stream Areas Requiring Observation**

<b>ID</b>	<b>Station</b>	<b>Feature</b>	<b>Problem</b>
SPA 1	9+75	Left Bank	Minor scour behind woody debris, no repair recommended at this time.
SPA 2	12+75	Rootwad	Minor erosion behind rootwad on right bank, no repair recommended at this time
SPA 3	33+75	Bedded Log Structure	Minor erosion behind log vane on left bank, no repair recommended at this time
SPA 4	46+50	Log Weir	Scour around log weir, no repair recommended at this time but continue to monitor
SPA 5	49+30	Bedded Log Structure	Vegetation and scour at bedded log structure, no repair recommended at this time but continue to monitor.
SPA 6	54+80	Bedded Log Structure	Minor erosion on right bank at bedded log structure, recommend filling erosion hole to prevent further erosion
SPA 7	55+50	Right Bank	Minor scour behind log vane, no repair recommended at this time but continue to monitor.
SPA 8	74+50	Log Vane	Minor erosion behind log vane on right bank, no repair recommended at this time.
SPA 9	74+80	Bed	Riffle is beginning to downcut, no repair recommended at this time but continue to monitor
SPA 10	74+90	Rock Weir	Erosion around header rock due to improper installation, recommend resetting header rock to prevent further erosion and headcut

**Table 12. Crest Gauge Data**

<b>Month Recorded</b>	<b>Crest Gauge 1</b>	<b>Crest Gauge 2</b>
January	---	---
February	0.00	0.30
March	0.95	0.90
April	0.35	0.45
May	0.20	0.00
June	0.00	0.00
July	1.25	1.60
August	---	---
September	---	---
October	---	---
November	---	---
December	---	---

Figure 7a.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 1  
 Bertie County, NC



- Legend**
- Roads
  - Stream
  - Vegetation Plots
  - Easement

- Stream Structures**
- Log Ramp
  - Rootwad
  - Log Vane
  - Log Grade Control
  - Bedded Log Structure
  - Log Toe

- Structure Conditions**
- Stable and Functional
  - Stable and Not Functional
  - Unstable and Functional
  - Unstable and Not Functional

**Riparian Buffer Conditions**

		Target Community		
		Present	Marginal	Absent
Invasive Species	Absent	No Fill		
	Present			
	Common			

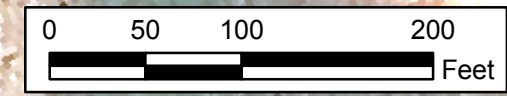




Figure 7b.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 1  
 Bertie County, NC



**Legend**

- Roads
- Stream
- Vegetation Plots
- Easement

**Stream Structures**

- Log Ramp
- Rootwad
- Log Vane
- Log Grade Control
- Bedded Log Structure
- Log Toe

**Structure Conditions**

- Stable and Functional
- Stable and Not Functional
- Unstable and Functional
- Unstable and Not Functional

**Riparian Buffer Conditions**

		Target Community		
		Present	Marginal	Absent
Invasive Species	Absent	No Fill		
	Present			
	Common			

Figure 7c.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 2  
 Bertie County, NC



**Legend**

- Roads
- Stream
- Vegetation Plots
- Easement

**Stream Structures**

- Log Ramp
- Rootwad
- Log Vane
- Log Grade Control
- Bedded Log Structure
- Log Toe

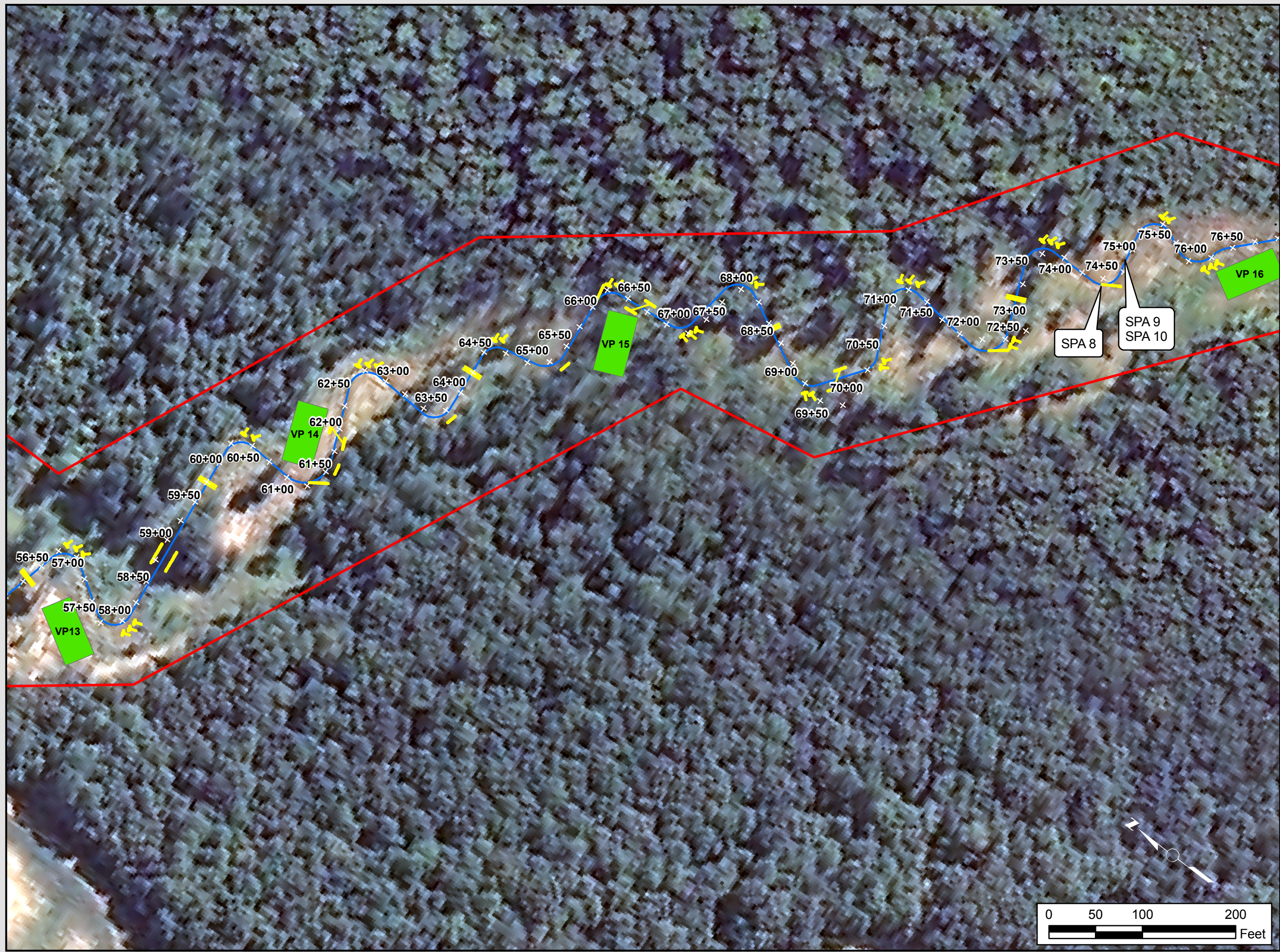
**Structure Conditions**

- Stable and Functional
- Stable and Not Functional
- Unstable and Functional
- Unstable and Not Functional

**Riparian Buffer Conditions**

Invasive Species	Target Community		
	Present	Marginal	Absent
Absent	No Fill		
Present			
Common			

Figure 7d.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 3  
 Bertie County, NC



- Legend**
- Roads
  - Stream
  - Vegetation Plots
  - Easement

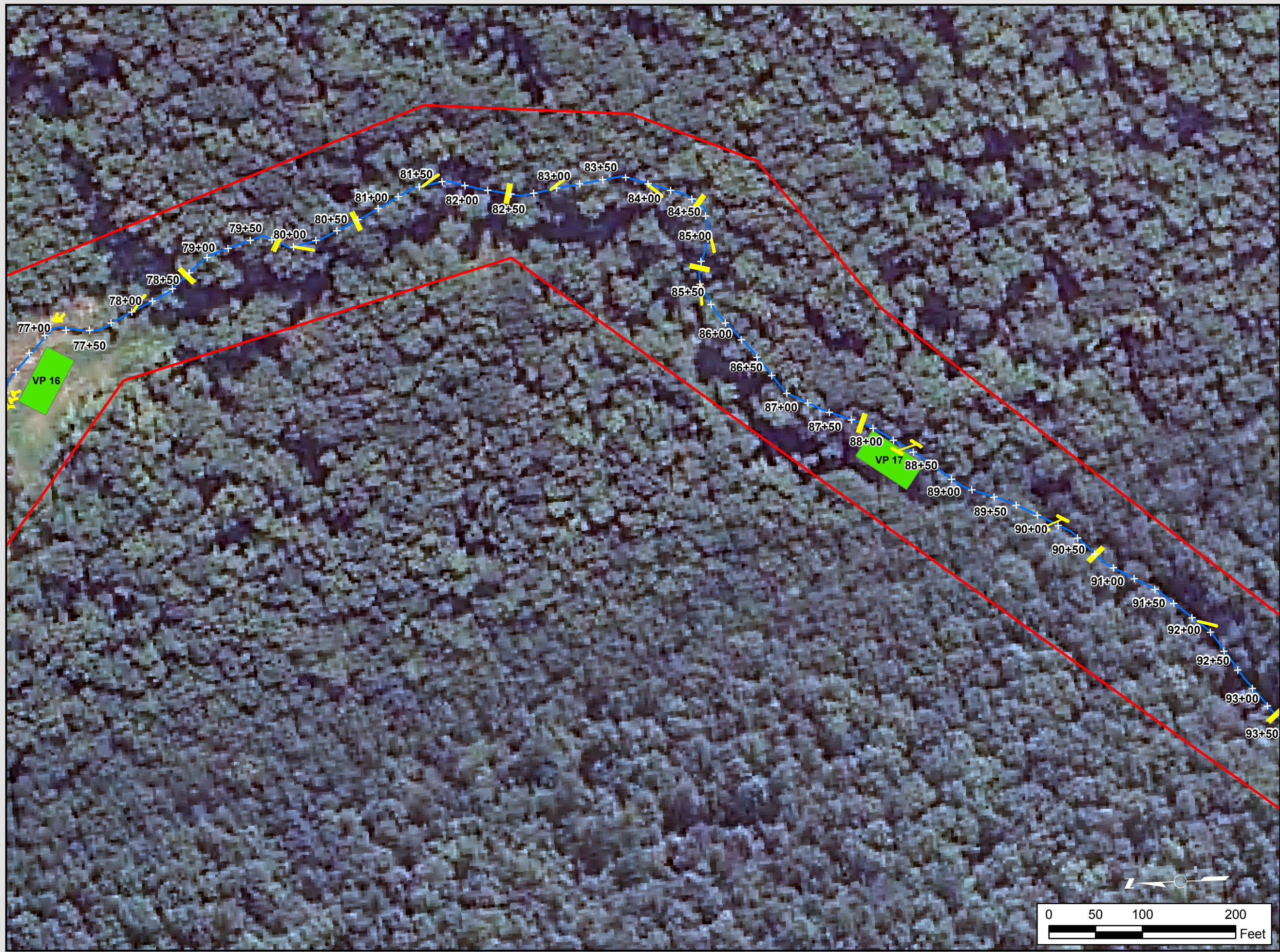
- Stream Structures**
- Log Ramp
  - Rootwad
  - Log Vane
  - Log Grade Control
  - Bedded Log Structure
  - Log Toe

- Structure Conditions**
- Stable and Functional
  - Stable and Not Functional
  - Unstable and Functional
  - Unstable and Not Functional

**Riparian Buffer Conditions**

		Target Community		
		Present	Marginal	Absent
Invasive Species	Absent	No Fill		
	Present			
	Common			

Figure 7e.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 4  
 Bertie County, NC



- Legend**
- Roads
  - Stream
  - Vegetation Plots
  - Easement

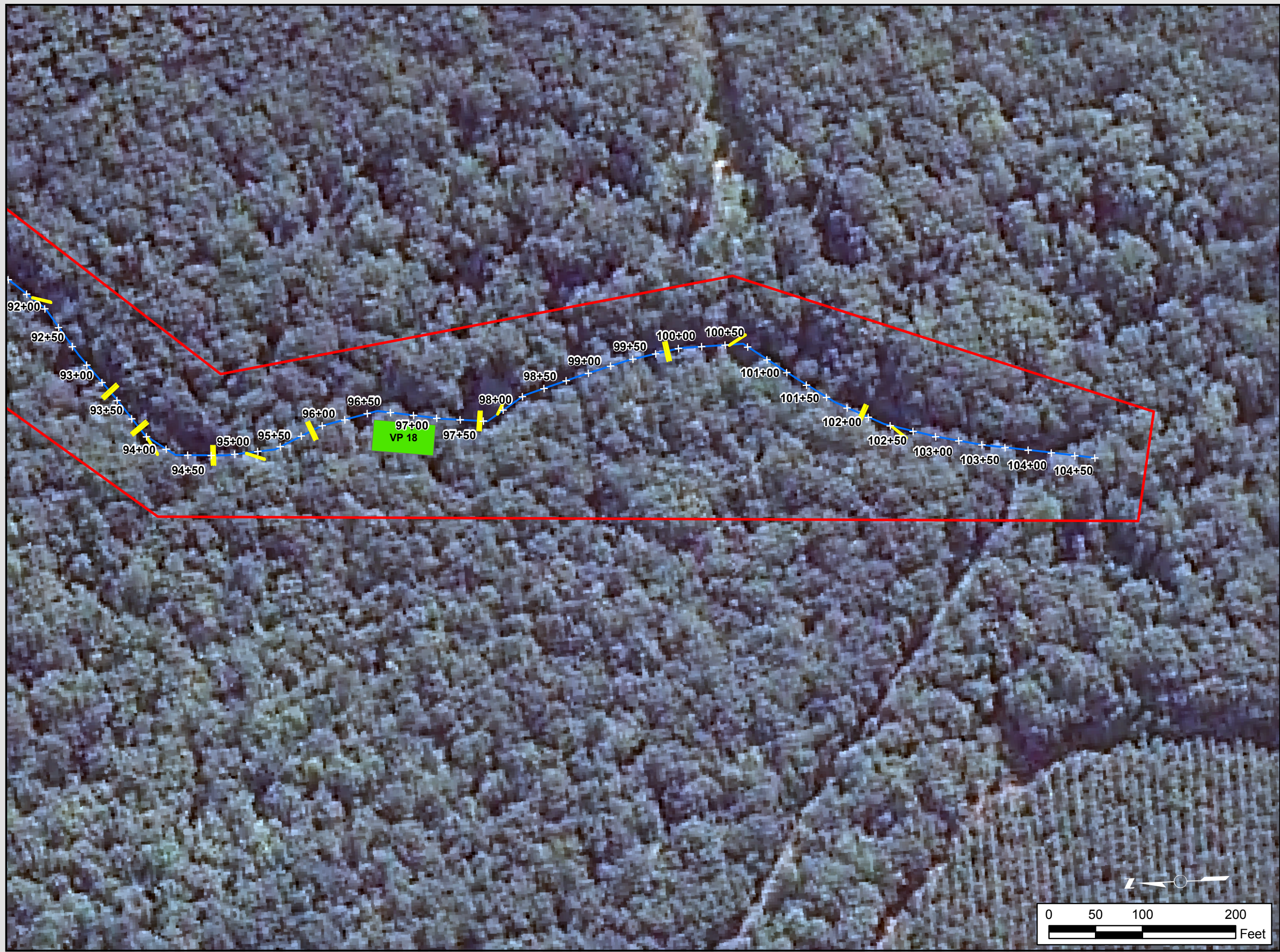
- Stream Structures**
- Log Ramp
  - Rootwad
  - Log Vane
  - Log Grade Control
  - Bedded Log Structure
  - Log Toe

- Structure Conditions**
- Stable and Functional
  - Stable and Not Functional
  - Unstable and Functional
  - Unstable and Not Functional

**Riparian Buffer Conditions**

		Target Community		
		Present	Marginal	Absent
Invasive Species	Absent	No Fill		
	Present			
	Common			

Figure 7f.  
 Floogie Mitigation Site  
 Stream Current Conditions  
 Reach: 4  
 Bertie County, NC



- Legend**
- Roads
  - Stream
  - Vegetation Plots
  - Easement

- Stream Structures**
- Log Ramp
  - Rootwad
  - Log Vane
  - Log Grade Control
  - Bedded Log Structure
  - Log Toe

- Structure Conditions**
- Stable and Functional
  - Stable and Not Functional
  - Unstable and Functional
  - Unstable and Not Functional

**Riparian Buffer Conditions**

		Target Community		
		Present	Marginal	Absent
Invasive Species	Absent	No Fill		
	Present			
	Common			

#### 5.4 BENTHIC MACROINVERTEBRATE SURVEY RESULTS

Pre-construction monitoring was performed prior to disturbance of the existing channel in January 2008. Following restoration, Year 1 monitoring was conducted in January 2009 (Table 14). Additional monitoring will be conducted in January of 2011 (Year 3) and 2013 (Year 5).

**Table 14. Year 1 Restoration Reach Macroinvertebrate Data**

Taxon		Site:	3 (Upstream Ref)	2 (Reach 2)	1 (Reach 4)
			Number	Number	Number
Order	TRICHOPTERA				
Genus Species	<i>Ironoquia punctatissima</i>		2	-	-
Genus Species	<i>Ptilostomis sp</i>		1	-	-
Order	COLEOPTERA				
Genus Species	<i>Enochrus sp</i>		-	-	-
Genus Species	<i>Agabus sp (Larvae)</i>		-	1	-
Genus Species	<i>Peltodytes sp</i>		-	-	-
Order	ODONATA				
Genus Species	<i>Somatochlora sp</i>		1	-	-
Order	DIPTERA				
Family	Miscellaneous				
Genus Species	<i>Chrysops sp</i>		1	-	-
Genus Species	<i>Prosimulium sp</i>		1	-	-
Order	DIPTERA				
Family	Chironomidae				
Genus Species	<i>Hydrobaenus sp</i>		2	30	4
Genus Species	<i>Orthocladius sp</i>		2	4	3
Genus Species	<i>Procladius sp</i>		-	3	-
Genus Species	<i>Chironomus sp</i>		-	1	-
Order	OLIGOCHAETA				
Genus Species	<i>Nais sp</i>		-	2	-
Genus Species	<i>Ecclipidrilus sp</i>		-	-	6
Order	CRUSTACEA				
Genus Species	<i>Crangonyx sp</i>		14	4	35
Genus Species	<i>Caecidotea forbesi</i>		8	1	-
Genus Species	<i>C. racovitzai</i>		6	-	-

Order	MOLLUSCA				
Genus Species	<i>Menetus dilatatus</i>		-	1	7
Genus Species	<i>Sphaerium sp</i>		-	-	1
Other	<i>Corixidae</i>		-	2	-
	<b>Taxa Richness</b>		<b>10</b>	<b>6</b>	<b>-</b>
	<b>EPT Taxa Richness</b>		<b>2</b>	<b>0</b>	<b>0</b>
	<b>NC Biotic Index</b>		<b>9.1</b>	<b>8.0</b>	

Streams in Bertie County are in NC DWQ Swamp Region B. Streams in this area have been severely affected by drought condition in late 2007, and it is expected that not many sites have the expected invertebrate community for “natural” swamp streams, including NCBI values less than 7.0 and EPT taxa richness >4. Under these difficult conditions, it is best to look at patterns, rather than to strictly apply DWQ criteria.

Only the upstream control site was dominated by the usual swamp taxa, especially amphipods (*Crangonyx*) and isopods (*Caecidotea spp*). The downstream sampling locations were dominated by smaller and more tolerant species, especially midges (*Hydrobaenus*) and worms. This produces a change in biotic index from 7.0 (almost “Natural”) to 8.6-9.1 (“Severe Stress”).

## 5.5 STREAM CONCLUSIONS

In-stream structures installed within the restored stream included log vanes, bedded log structures, woody debris bundles, and root wads. Visual observations of structures throughout the 2009 growing season have indicated that most structures are stable and functioning as designed. Localized areas of elevated profile (shallows) have been colonized by wetland plant species due to low stream flow, but do not appear to be impounding water or causing increased deposition. Two minor localized areas of erosion were present but do not present a problem to stream stability (STA 14+90 and STA 25+40). These areas are subject to concentrated overland flow entering the channel and may need additional stabilization in the future. No corrective actions are recommended at this time as the channel appears to be moving toward stability. Minor downcutting occurred at cross section 15 due to an increase in flow velocities that resulted from an improperly functioning rock weir just downstream. It is recommended that the header rock be reset or backfilled with Class A gravel in order to prevent further headcut.

Photographs were taken throughout the monitoring season to document the evolution of the restored stream channel (Appendix D). Herbaceous vegetation is moderately dense to dense along the restored stream. Pools have maintained a variety of depths and habitat qualities, depending on the location and type of scour features (logs, root wads, transplants, etc.). Throughout the growing season a consistent stream flow was present during the monthly site visits. During the annual monitoring survey, a bankfull event occurred (0.88 inches of rainfall in a one day period), causing the monitored water level to rise dramatically in a short period of time.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

- All hydrology monitoring gauges recorded consecutive hydroperiods for at least 7 percent of the growing season for 2009.

*Floogie Mitigation Site  
Annual Monitoring Report for 2009 (Year 2)*

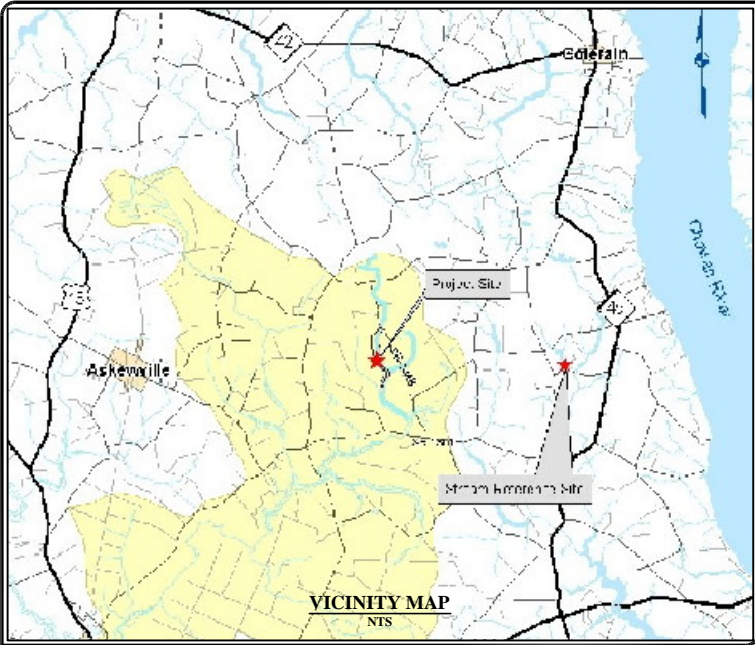
- The restored stream channel has remained stable and is providing the intended habitat and hydrologic functions. All monitoring cross sections and longitudinal profile for 2009 showed very little adjustment in stream dimension, with the exception of cross section 15.
- Vegetation monitoring has determined the average number of stems per acre on site to be 655, with the range of stem density of 340 to 980 stems per acre. All vegetation plots are meeting the interim success criteria of 320 trees per acre.
- Vegetative and stream monitoring will continue through 2012.



# **APPENDIX A**

## **As-Built Survey**

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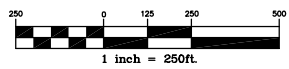
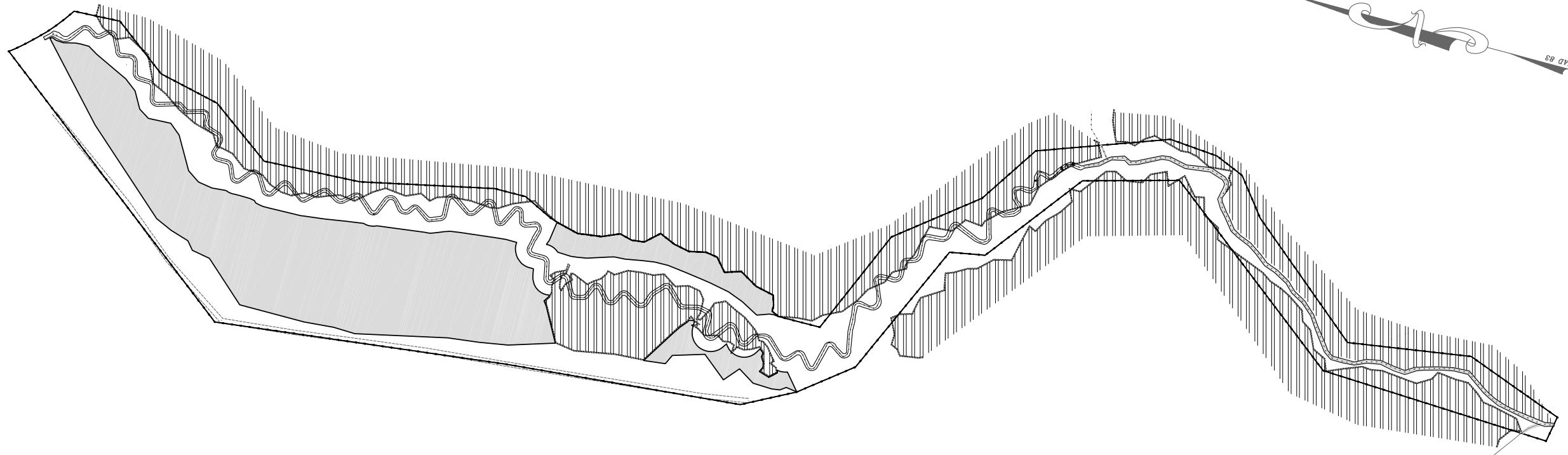
# FLOOGIE MITIGATION PROJECT AS-BUILT PLAN SET

APRIL 2008

LOCATION: BERTIE COUNTY, NORTH CAROLINA

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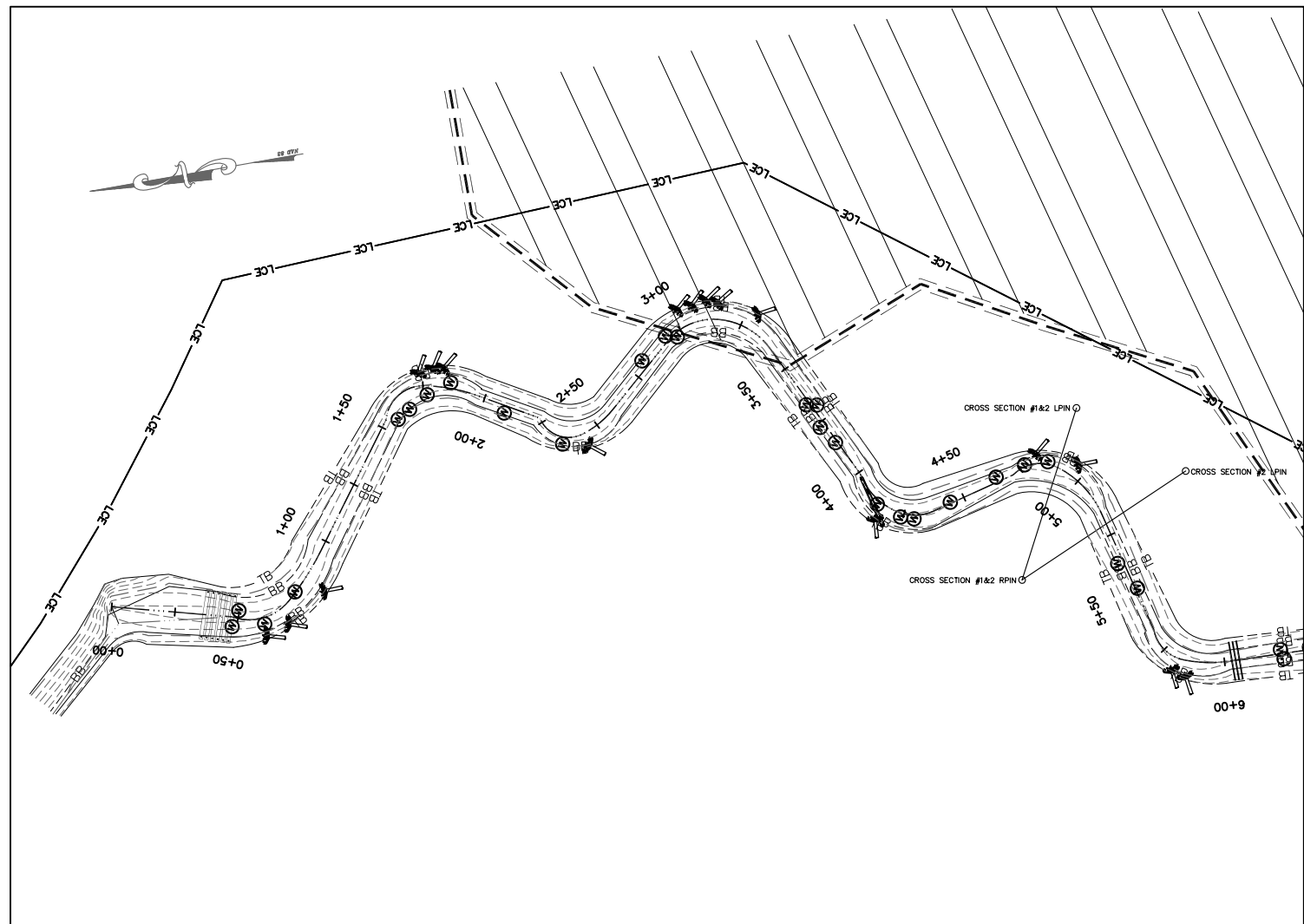
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







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DRAWN BY JLL	PROJECT DATE 08/2007		Office Locations: North Carolina South Carolina	BIDDING	
APPROVED BY DPI	PROJECT NUMBER 5043100RA		Georgia	CONSTRUCTION	
FILE NAME design.dwg	PLAT DATE 03/28/08			RECORD DWG.	

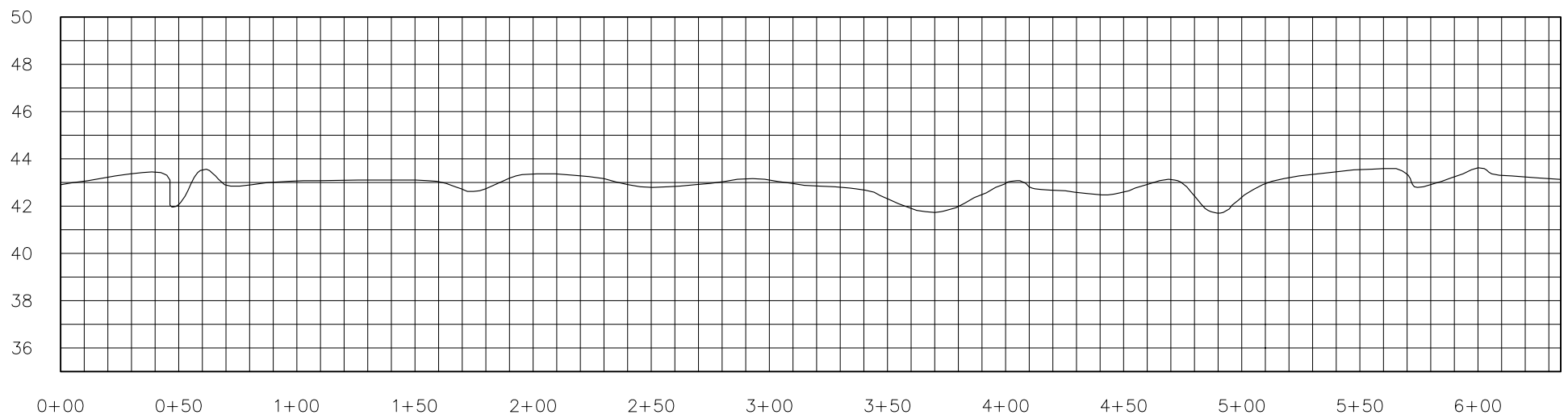
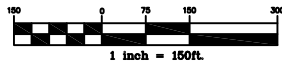
ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 COVER & INDEX SHEET

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- LEGEND**
- EXISTING CONTOURS ———
  - CENTERLINE OF EXISTING DITCH - - - - -
  - BOTTOM OF BANK ——— BB ———
  - TOP OF BANK ——— TB ———
  - LIMITS OF CONSERVATION EASMENT ——— LCE ———
  - LOG RAMP 
  - LOG GRADE CONTROL 
  - LOG TOE PROTECTION 
  - LOG VANE 
  - FORD CROSSING 
  - ROOT WAD 
  - CHANNEL PLUG 
  - WETLAND CHANNEL PLUG 
  - EXISTING WETLANDS 
  - BEDDED LOG STRUCTURE 
  - SMALL WOODY DEBRIS 



Horizontal Scale: 1 inch = 30ft.  
Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

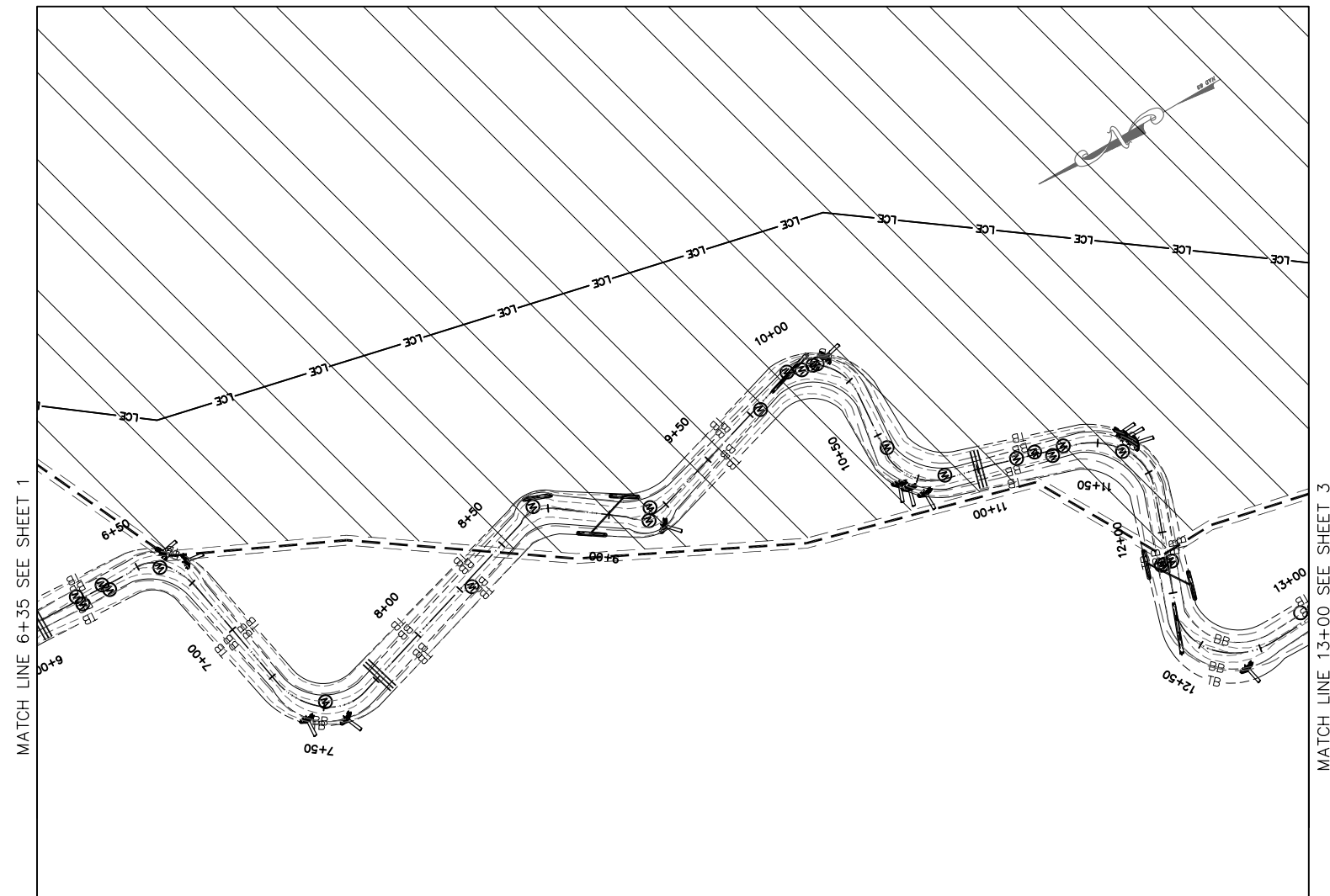
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APPROVED BY DPI	PROJECT NUMBER 5043100RA		CONSTRUCTION	
FILE NAME design.dwg	PLOT DATE 03/28/08		RECORD DWG.	



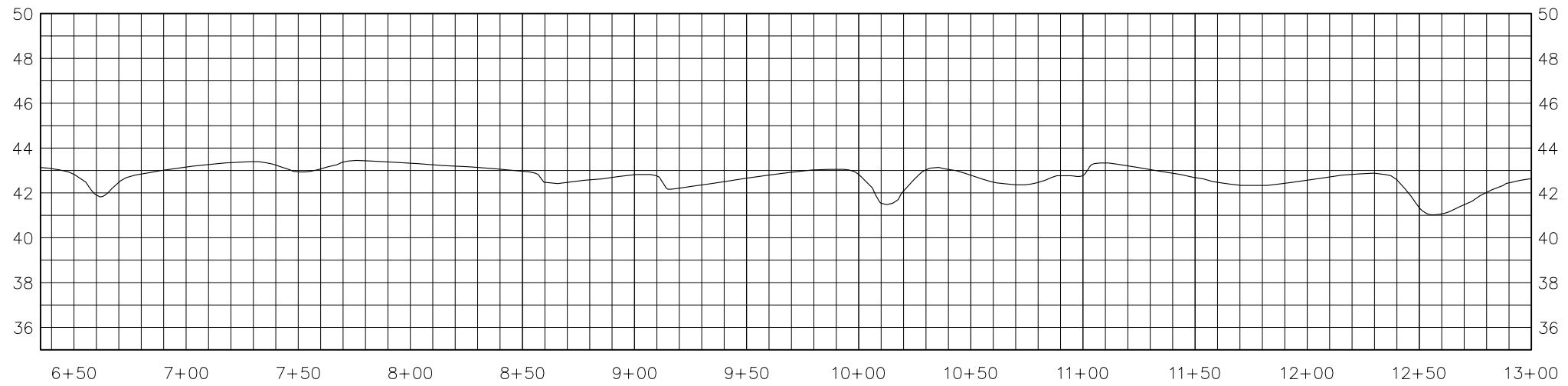
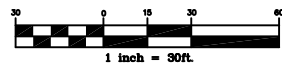
ENVIRONMENTAL BANC & EXCHANGE, LLC  
FLOOGIE MITIGATION PROJECT  
BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
STA. 0+00 TO STA. 6+35

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- LEGEND**
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  - CENTERLINE OF EXISTING DITCH ———
  - BOTTOM OF BANK ——— BB ———
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  - CHANNEL PLUG
  - WETLAND CHANNEL PLUG
  - EXISTING WETLANDS
  - BEDDED LOG STRUCTURE
  - SMALL WOODY DEBRIS



Horizontal Scale: 1 inch = 30ft.  
Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

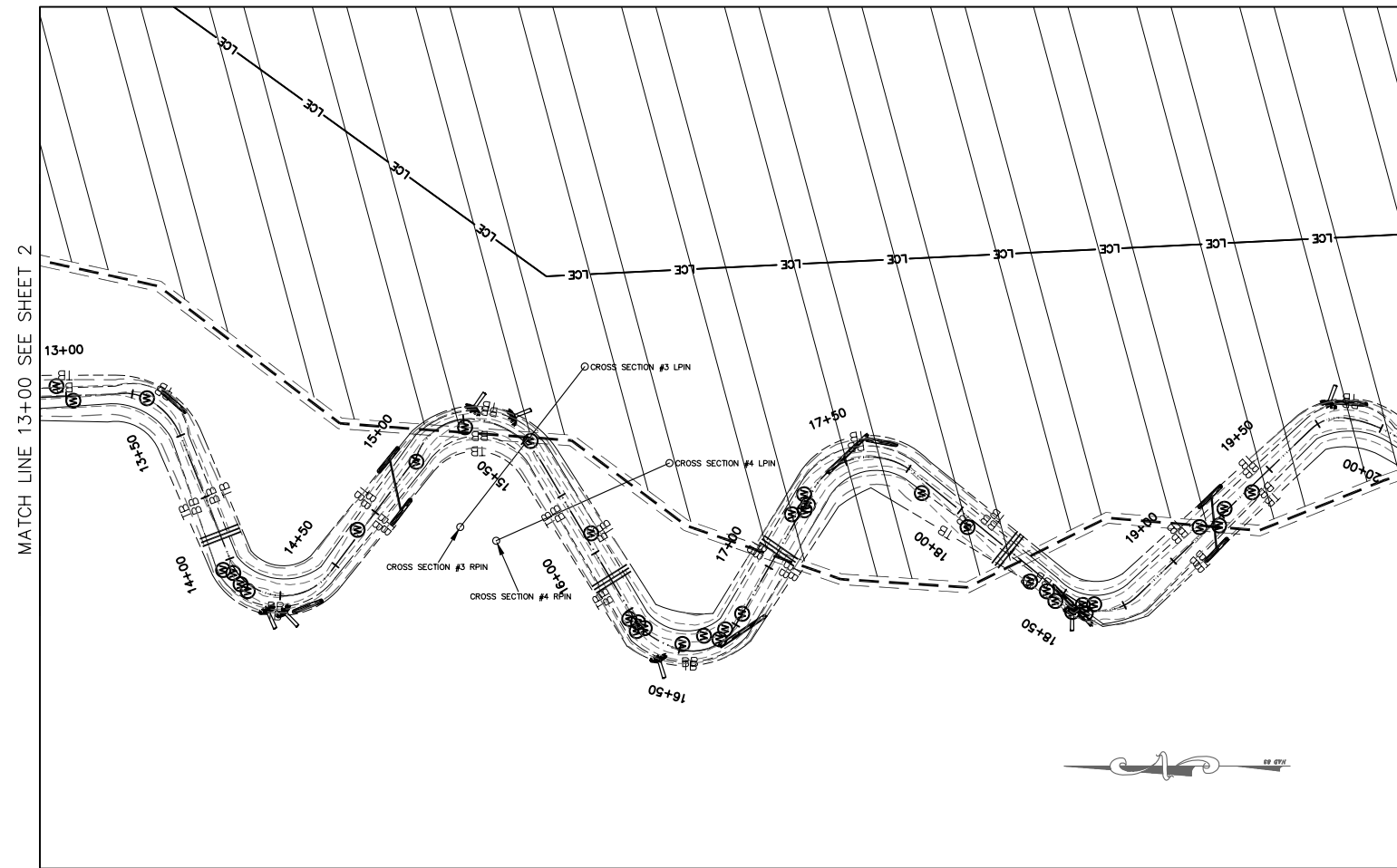
PROJECT MANAGER DPI	DRAWING SCALE 1" = 30'	 720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495  Office Locations: North Carolina Georgia South Carolina	RELEASED FOR	DATE
DRAWN BY JLL	PROJECT DATE 08/2007		APPROVALS	
APPROVED BY DPI	PROJECT NUMBER 5043100RA		BIDDING	
FILE NAME design.dwg	PLOT DATE 03/28/08		CONSTRUCTION	
			RECORD DWG.	



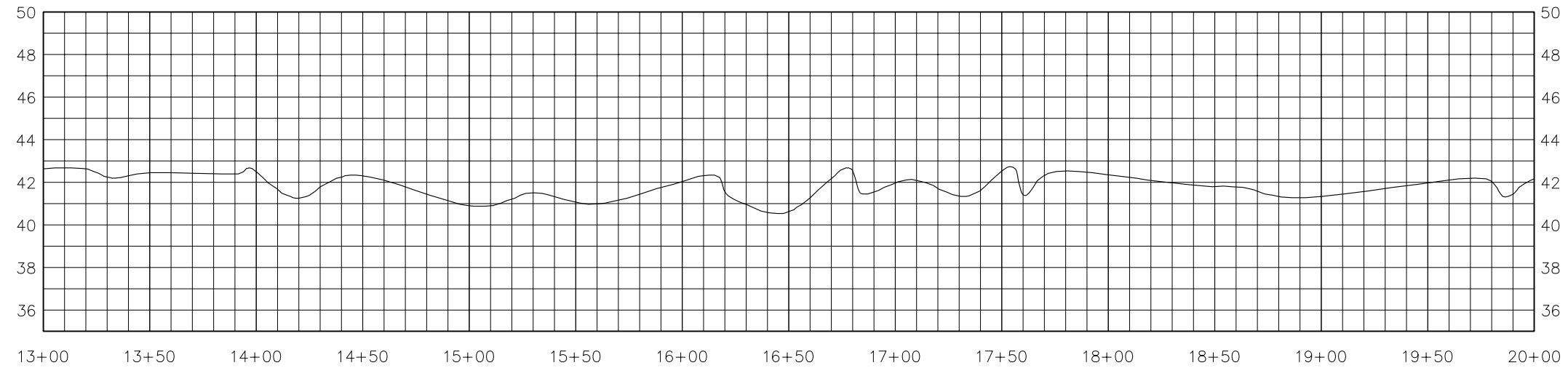
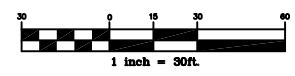
ENVIRONMENTAL BANC & EXCHANGE, LLC  
FLOOGIE MITIGATION PROJECT  
BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
STA. 6+35 TO STA. 13+00

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- LEGEND**
- EXISTING CONTOURS
  - CENTERLINE OF EXISTING DITCH
  - BOTTOM OF BANK BB
  - TOP OF BANK TB
  - LIMITS OF CONSERVATION EASMENT LCE
  - LOG RAMP
  - LOG GRADE CONTROL
  - LOG TOE PROTECTION
  - LOG VANE
  - FORD CROSSING
  - ROOT WAD
  - CHANNEL PLUG
  - WETLAND CHANNEL PLUG
  - EXISTING WETLANDS
  - BEDDED LOG STRUCTURE
  - SMALL WOODY DEBRIS



Horizontal Scale: 1 inch = 30ft.  
Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

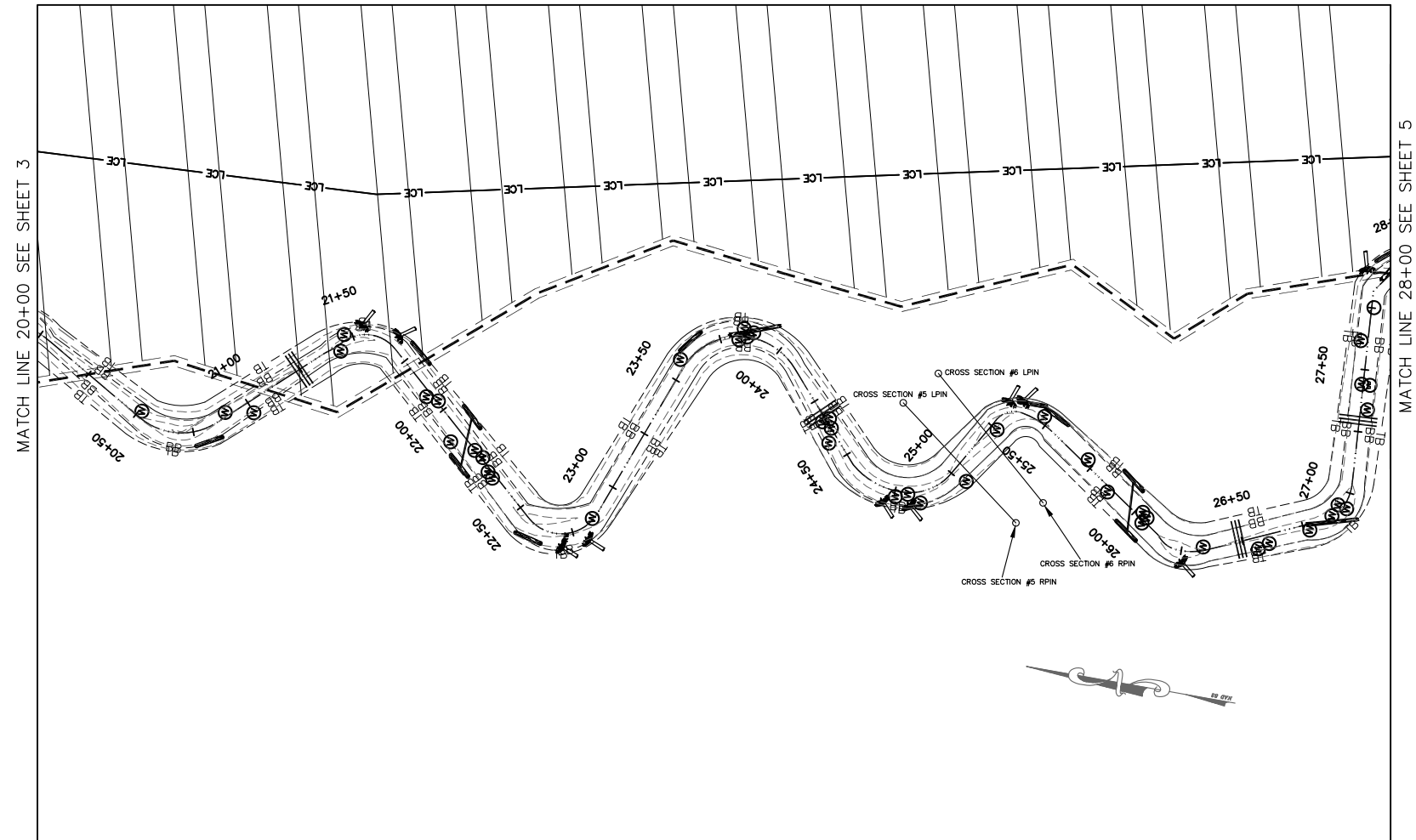
PROJECT MANAGER DPI	DRAWING SCALE 1" = 30'	 community infrastructure consultants	720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495	RELEASED FOR APPROVALS	DATE
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APPROVED BY DPI	PROJECT NUMBER 5043100RA	Georgia	CONSTRUCTION		
FILE NAME design.dwg	PLOT DATE 03/28/08		RECORD DWG.		














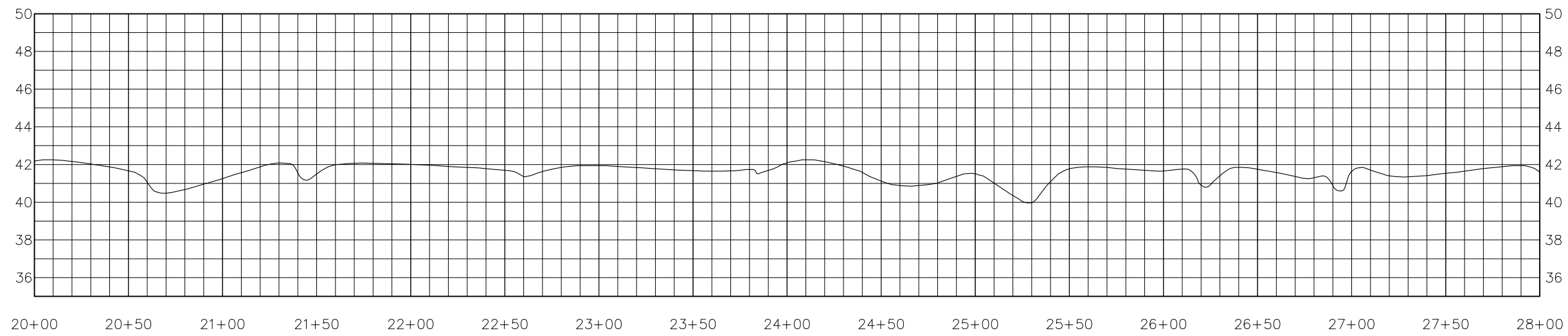
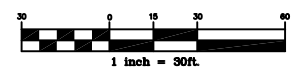
ENVIRONMENTAL BANC & EXCHANGE, LLC  
FLOOGIE MITIGATION PROJECT  
BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
STA. 13+00 TO STA. 20+00

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- LEGEND**
- EXISTING CONTOURS ———
  - CENTERLINE OF EXISTING DITCH - - - - -
  - BOTTOM OF BANK ——— BB ———
  - TOP OF BANK ——— TB ———
  - LIMITS OF CONSERVATION EASEMENT ——— LCE ———
  - LOG RAMP 
  - LOG GRADE CONTROL 
  - LOG TOE PROTECTION 
  - LOG VANE 
  - FORD CROSSING 
  - ROOT WAD 
  - CHANNEL PLUG 
  - WETLAND CHANNEL PLUG 
  - EXISTING WETLANDS 
  - BEDDED LOG STRUCTURE 
  - SMALL WOODY DEBRIS 



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

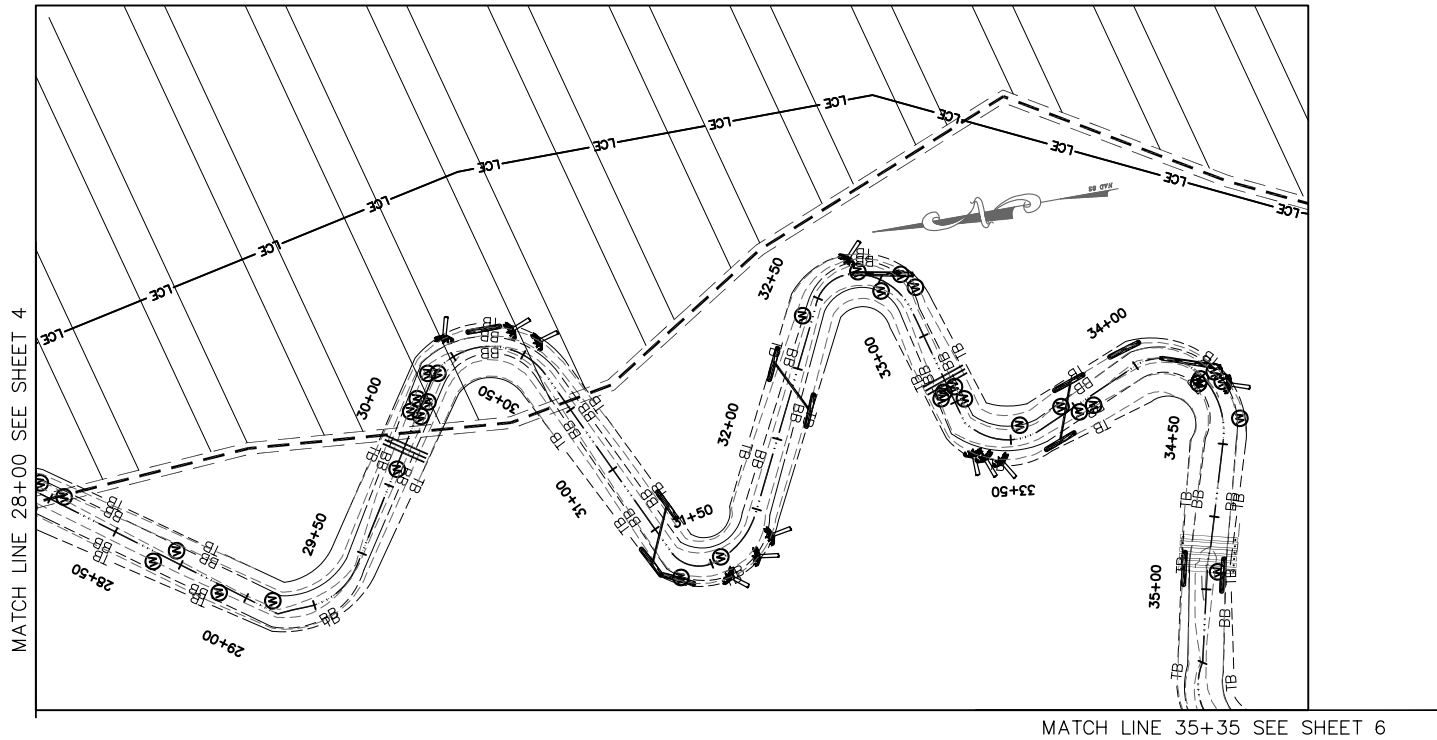
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DRAWN BY JLL	PROJECT DATE 08/2007		BIDDING	
APPROVED BY DPI	PROJECT NUMBER 5043100RA		CONSTRUCTION	
FILE NAME design.dwg	PLOT DATE 03/28/08		RECORD DWG.	



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

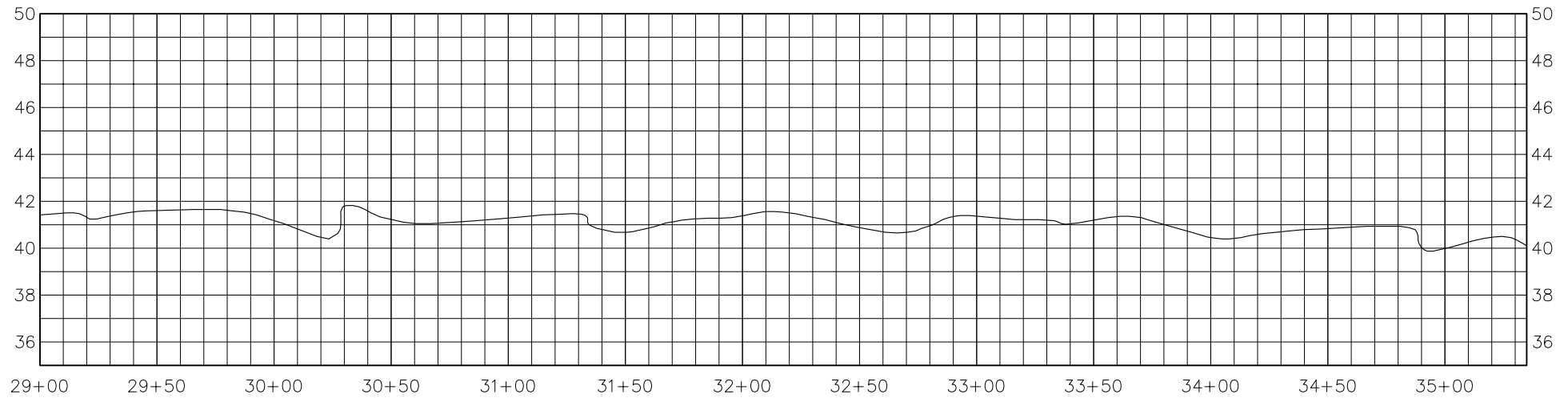
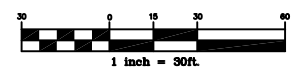
FLOOGIE AS-BUILT PLANS  
 STA. 20+00 TO STA. 28+00

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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	---
BOTTOM OF BANK	BB ---
TOP OF BANK	TB ---
LIMITS OF CONSERVATION EASEMENT	LCE ---
LOG RAMP	
LOG GRADE CONTROL	
LOG TOE PROTECTION	
LOG VANE	
FORD CROSSING	
ROOT WAD	
CHANNEL PLUG	
WETLAND CHANNEL PLUG	
EXISTING WETLANDS	
BEDDED LOG STRUCTURE	
SMALL WOODY DEBRIS	



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

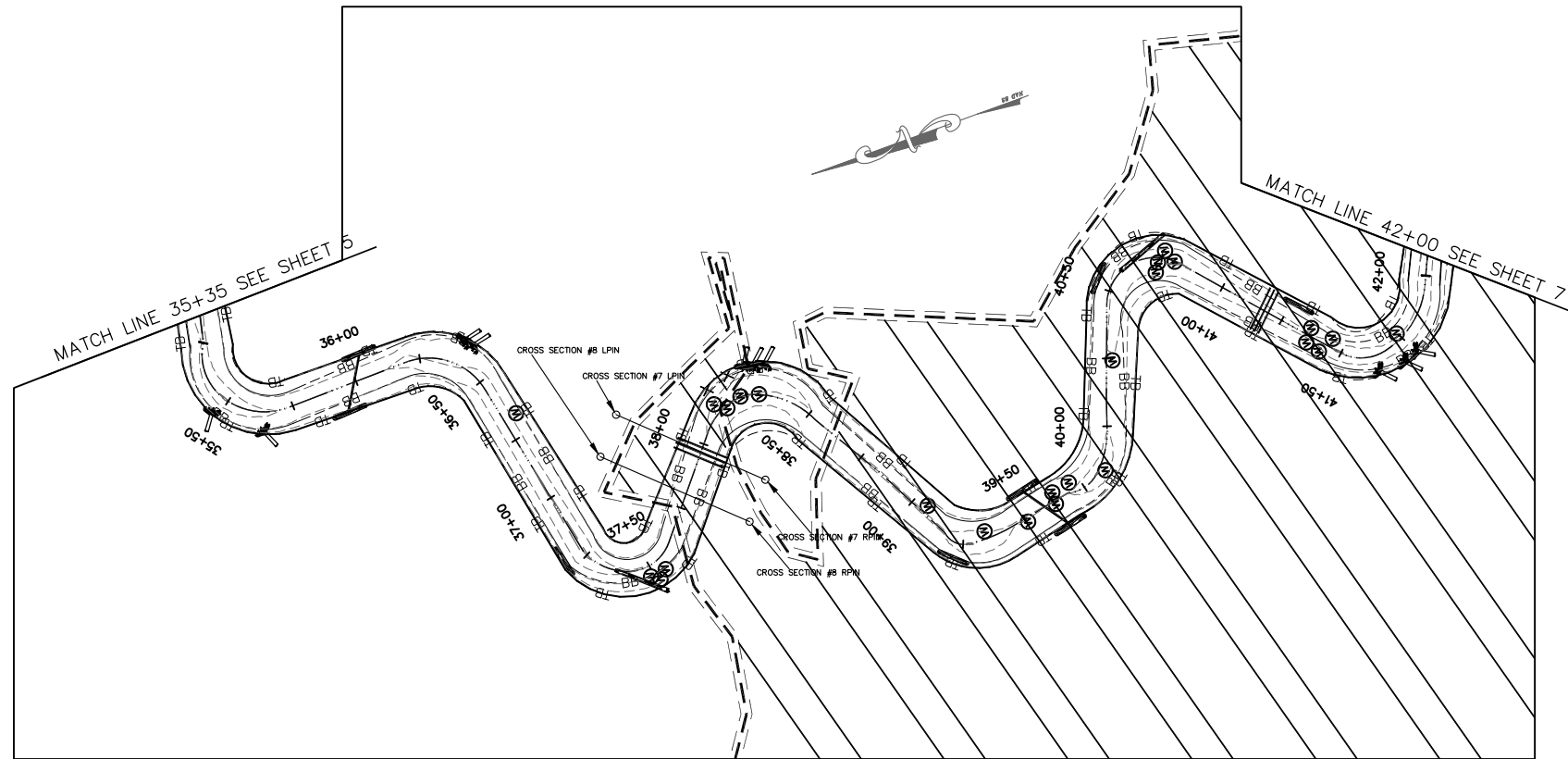
<b>PROJECT MANAGER</b> DPI <b>DRAWN BY</b> JLL <b>APPROVED BY</b> DPI <b>FILE NAME</b> design.dwg	<b>DRAWING SCALE</b> 1" = 30' <b>PROJECT DATE</b> 08/2007 <b>PROJECT NUMBER</b> 5043100RA <b>PLAT DATE</b> 03/28/08	 <b>community infrastructure consultants</b> 720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495 Office Locations: North Carolina    Georgia South Carolina	<b>RELEASED FOR</b> APPROVALS BIDDING CONSTRUCTION RECORD DWG.	<b>DATE</b>     
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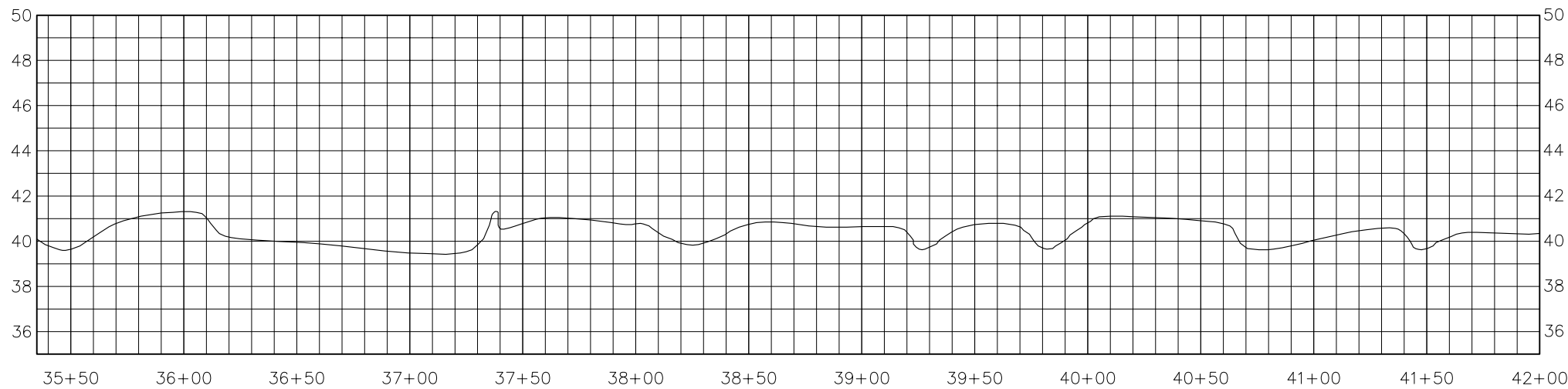
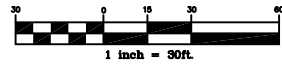
ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 28+00 TO STA. 35+35

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- LEGEND**
- EXISTING CONTOURS ————
  - CENTERLINE OF EXISTING DITCH ————
  - BOTTOM OF BANK ———— BB ————
  - TOP OF BANK ———— TB ————
  - LIMITS OF CONSERVATION EASEMENT ———— LCE ————
  - LOG RAMP
  - LOG GRADE CONTROL
  - LOG TOE PROTECTION
  - LOG VANE
  - FORD CROSSING
  - ROOT WAD
  - CHANNEL PLUG
  - WETLAND CHANNEL PLUG
  - EXISTING WETLANDS
  - BEDDED LOG STRUCTURE
  - SMALL WOODY DEBRIS



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER  
 DPI  
 DRAWN BY  
 JLL  
 APPROVED BY  
 DPI  
 FILE NAME  
 design.dwg



720 CORPORATE CENTER DRIVE  
 RALEIGH, NC 27607  
 (919) 782-0495  
 Office Locations:  
 North Carolina Georgia  
 South Carolina

RELEASED FOR	DATE
APPROVALS	
BIDDING	
CONSTRUCTION	
RECORD DWG.	

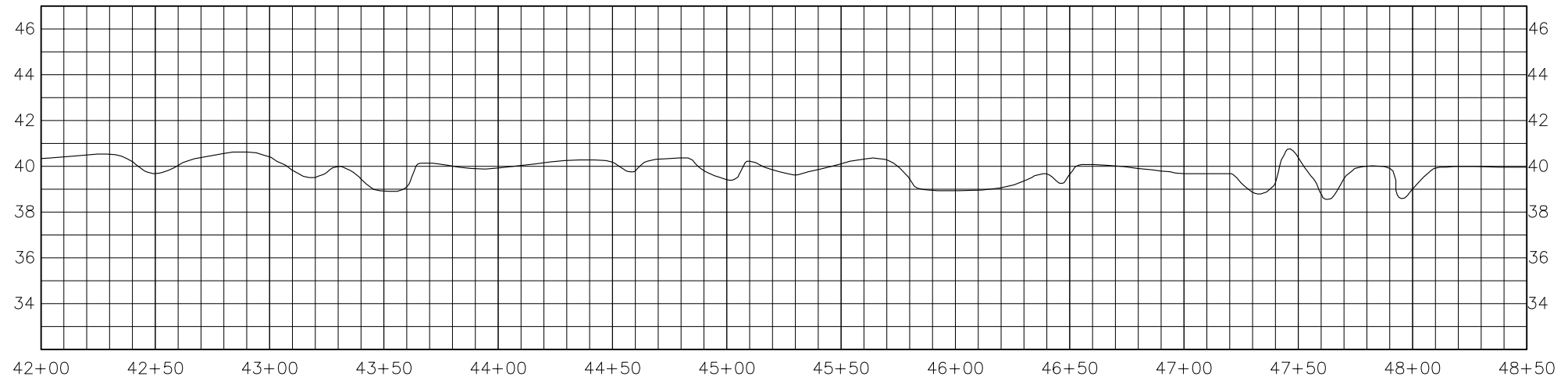
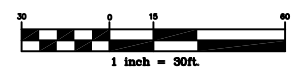
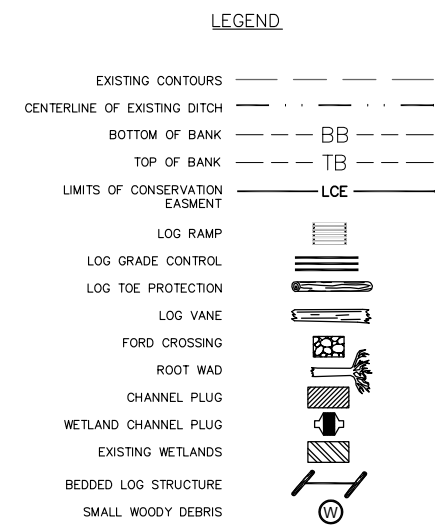
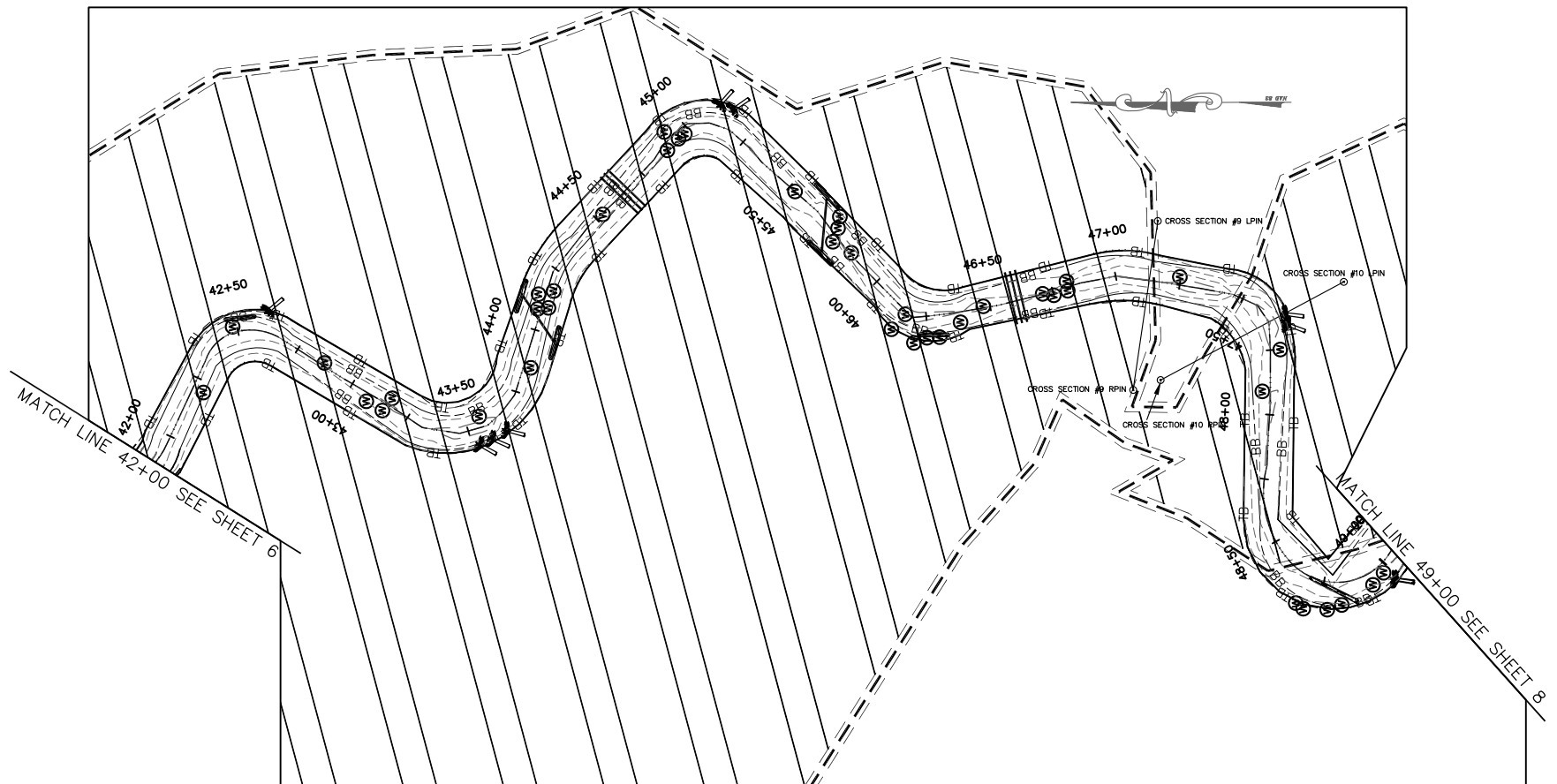


ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 35+35 TO STA. 42+00



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Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

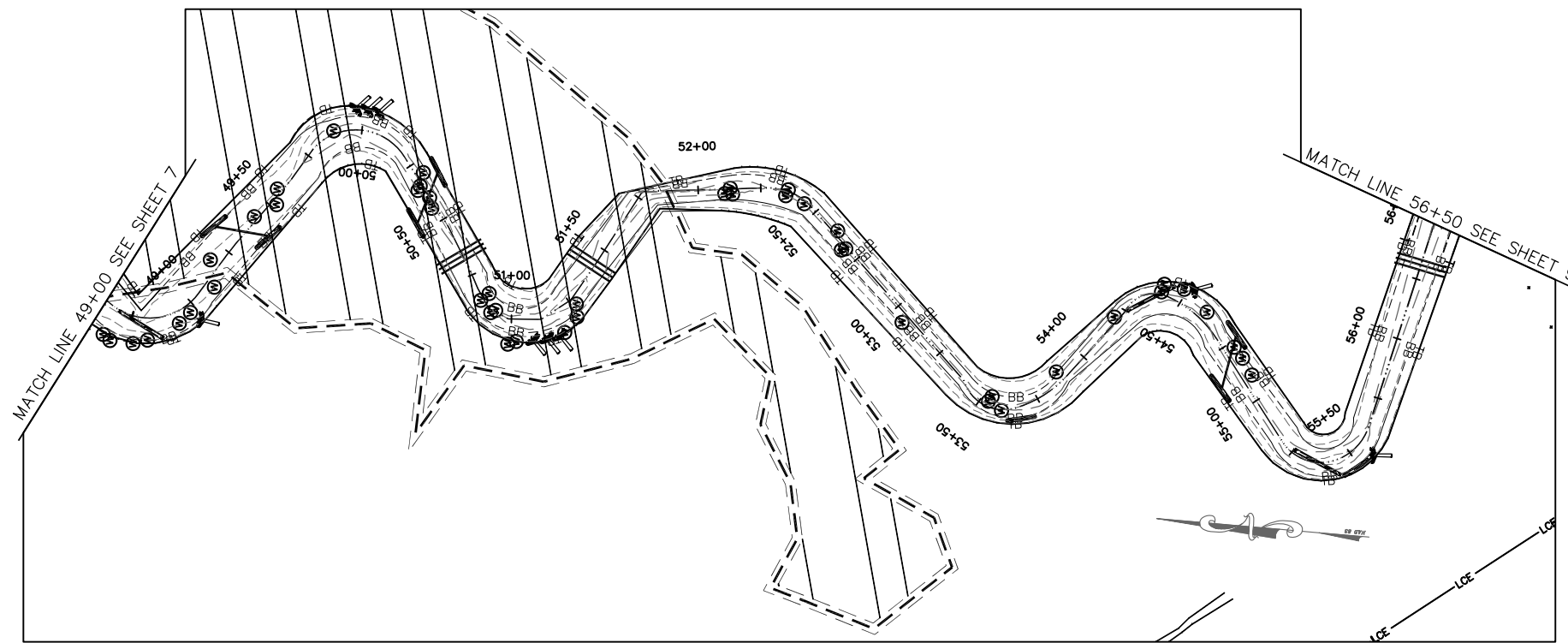
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ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

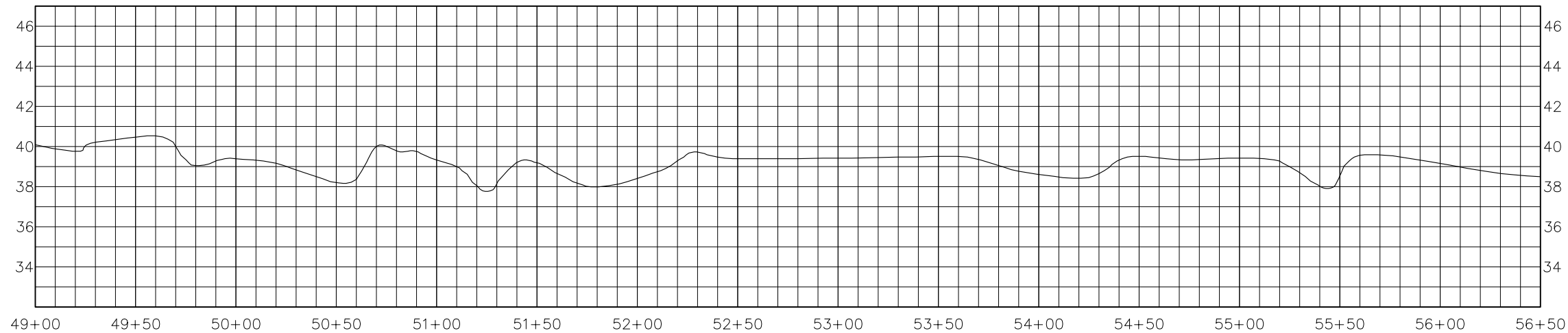
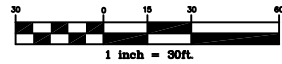
FLOOGIE AS-BUILT PLANS  
 STA. 42+00 TO STA. 49+00

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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	---
BOTTOM OF BANK	BB ---
TOP OF BANK	TB ---
LIMITS OF CONSERVATION EASEMENT	LCE ---
LOG RAMP	
LOG GRADE CONTROL	
LOG TOE PROTECTION	
LOG VANE	
FORD CROSSING	
ROOT WAD	
CHANNEL PLUG	
WETLAND CHANNEL PLUG	
EXISTING WETLANDS	
BEDDED LOG STRUCTURE	
SMALL WOODY DEBRIS	



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

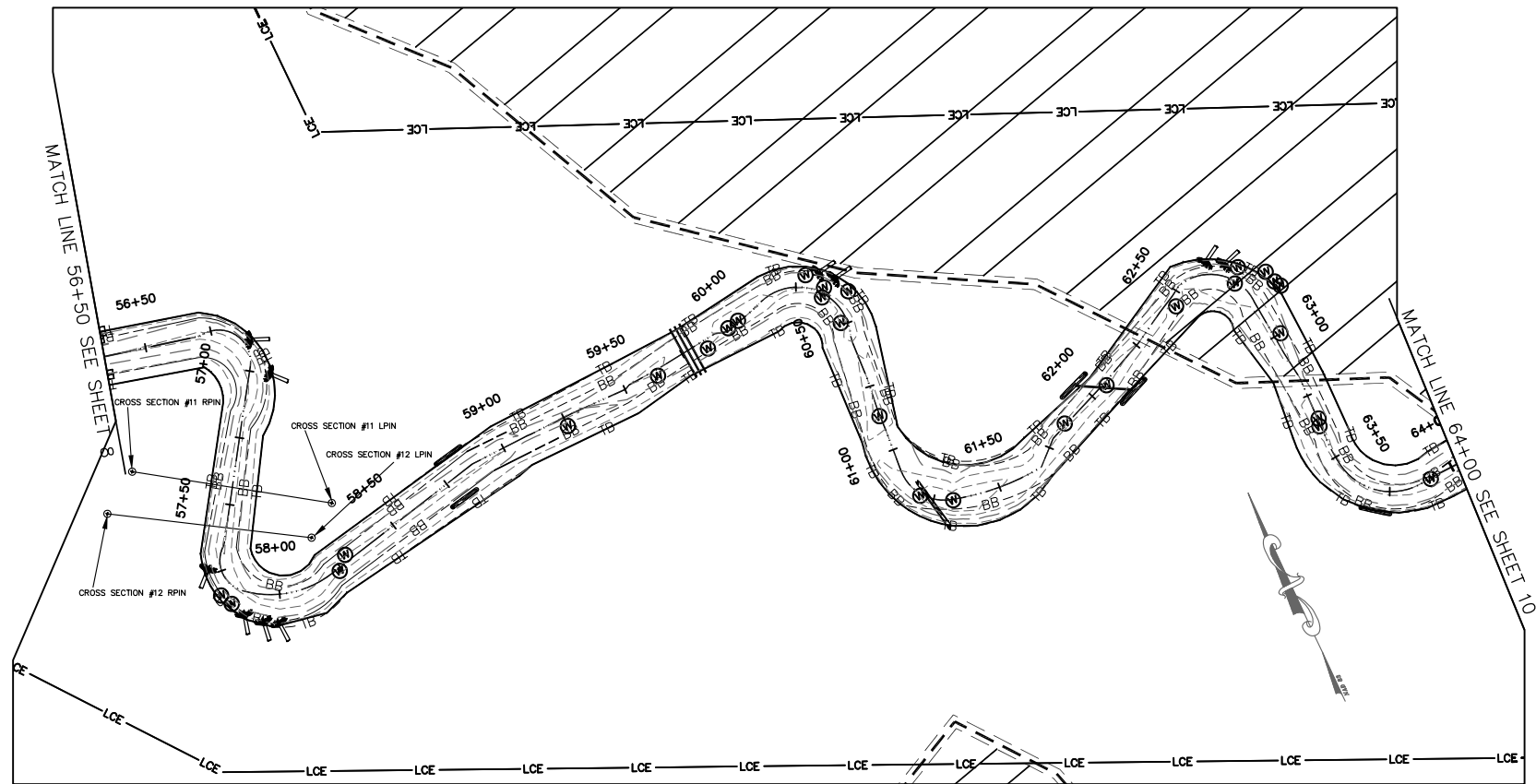
PROJECT MANAGER DPI	DRAWING SCALE 1" = 30'	 community infrastructure consultants 720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495 Office Locations: North Carolina    Georgia South Carolina	RELEASED FOR	DATE
DRAWN BY JLL	PROJECT DATE 08/2007		APPROVALS	
APPROVED BY DPI	PROJECT NUMBER 5043100RA		BIDDING	
FILE NAME design.dwg	PLOT DATE 03/28/08		CONSTRUCTION	
			RECORD DWG.	



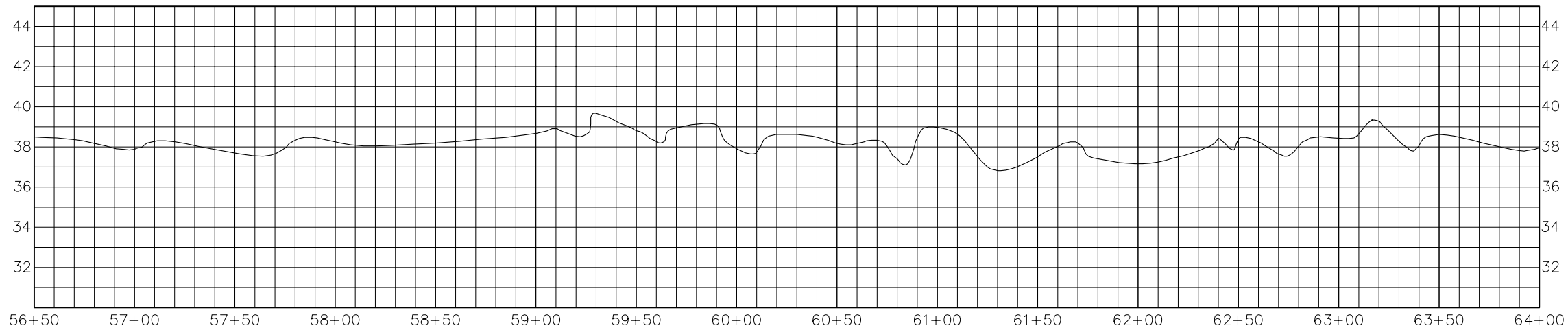
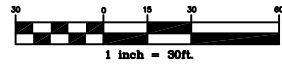
ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 49+00 TO STA. 56+50

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- LEGEND**
- EXISTING CONTOURS
  - CENTERLINE OF EXISTING DITCH
  - BOTTOM OF BANK
  - TOP OF BANK
  - LIMITS OF CONSERVATION EASEMENT
  - LOG RAMP
  - LOG GRADE CONTROL
  - LOG TOE PROTECTION
  - LOG VANE
  - FORD CROSSING
  - ROOT WAD
  - CHANNEL PLUG
  - WETLAND CHANNEL PLUG
  - EXISTING WETLANDS
  - BEDDED LOG STRUCTURE
  - SMALL WOODY DEBRIS



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

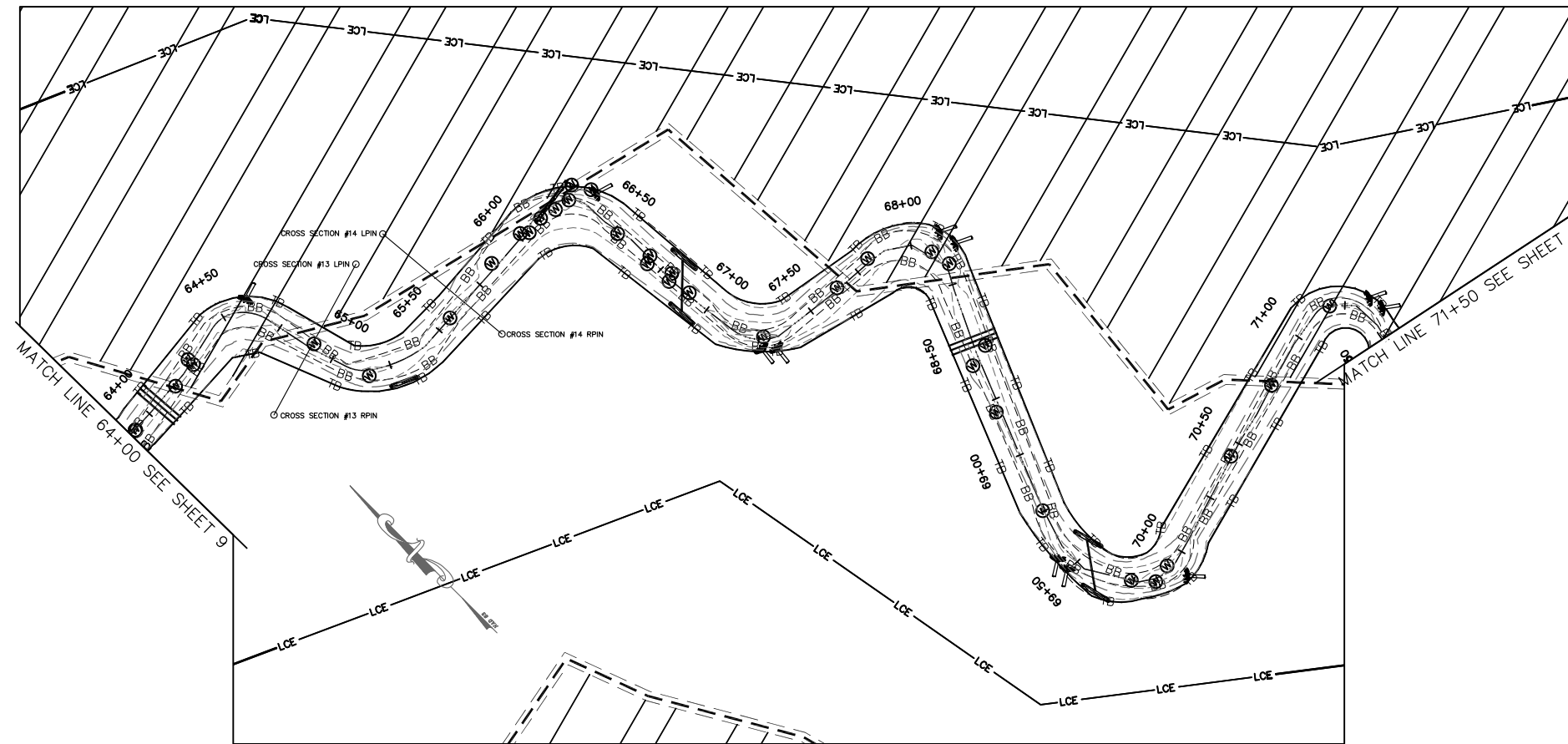
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DRAWN BY JLL	PROJECT DATE 08/2007		APPROVALS	
APPROVED BY DPI	PROJECT NUMBER 5043100RA	Office Locations:	BIDDING	
FILE NAME design.dwg	PLOT DATE 03/28/08	North Carolina	CONSTRUCTION	
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		South Carolina		



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

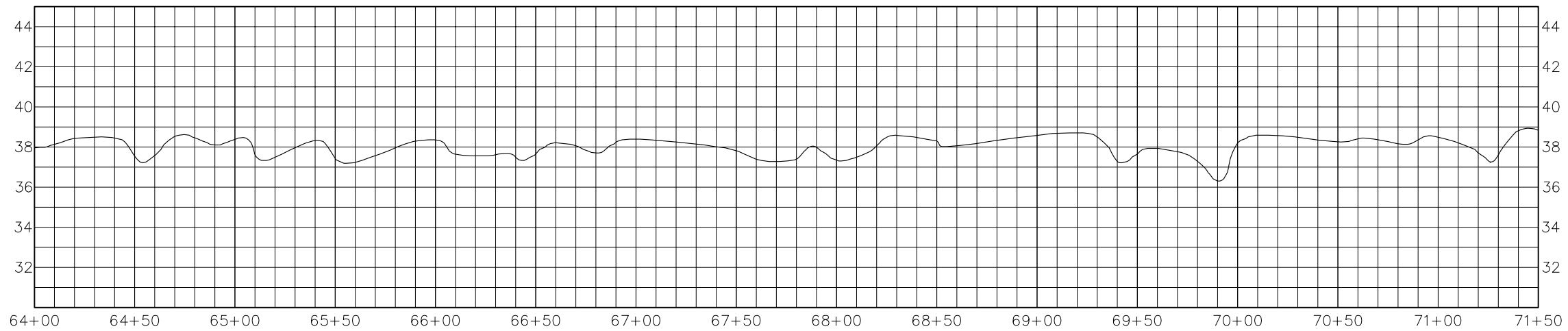
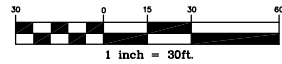
FLOOGIE AS-BUILT PLANS  
 STA. 56+50 TO STA. 64+00

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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	---
BOTTOM OF BANK	--- BB ---
TOP OF BANK	--- TB ---
LIMITS OF CONSERVATION EASEMENT	--- LCE ---
LOG RAMP	
LOG GRADE CONTROL	
LOG TOE PROTECTION	
LOG VANE	
FORD CROSSING	
ROOT WAD	
CHANNEL PLUG	
WETLAND CHANNEL PLUG	
EXISTING WETLANDS	
BEDDED LOG STRUCTURE	
SMALL WOODY DEBRIS	



Horizontal Scale: 1 inch = 30ft.  
Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

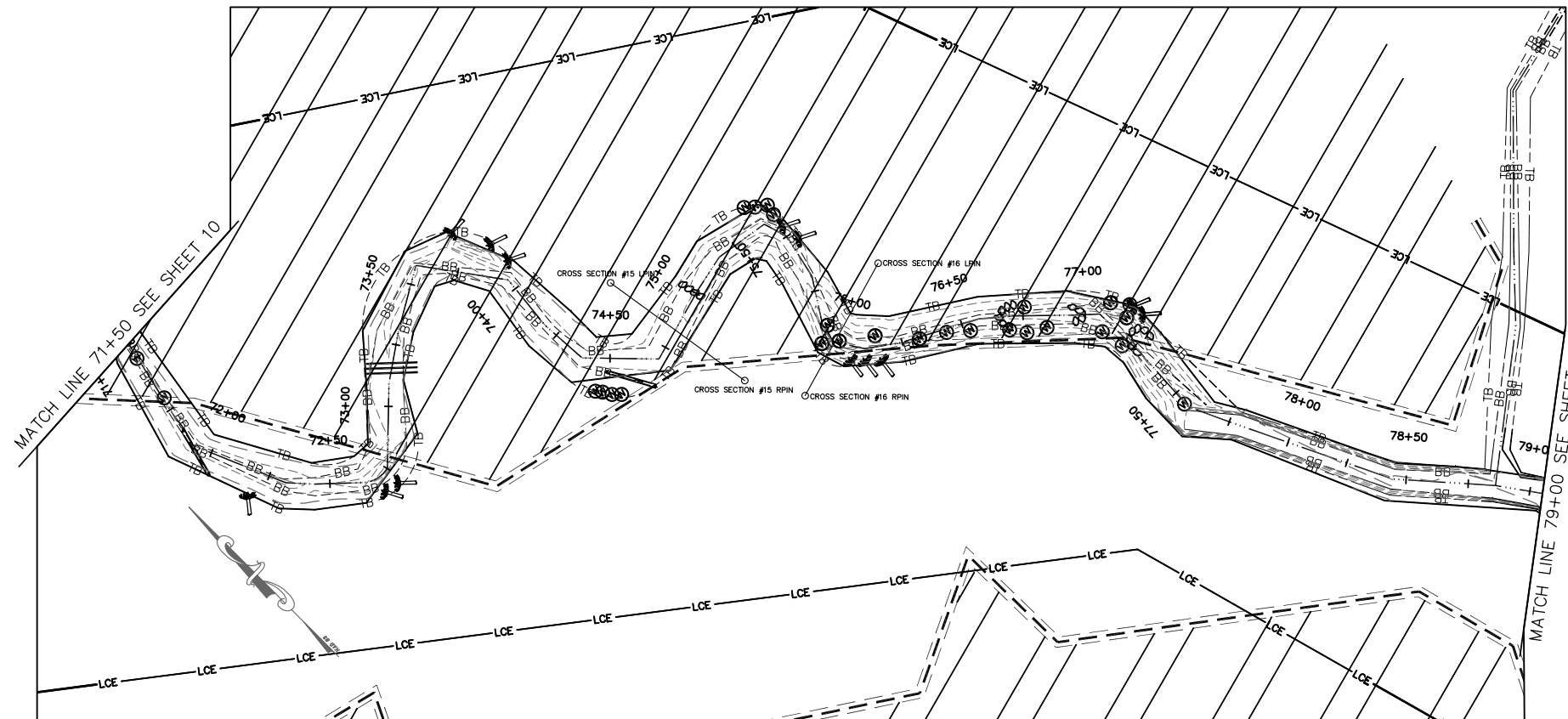
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DRAWN BY JLL	PROJECT DATE 08/2007		BIDDING	
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FILE NAME design.dwg	PLOT DATE 03/28/08		RECORD DWG.	














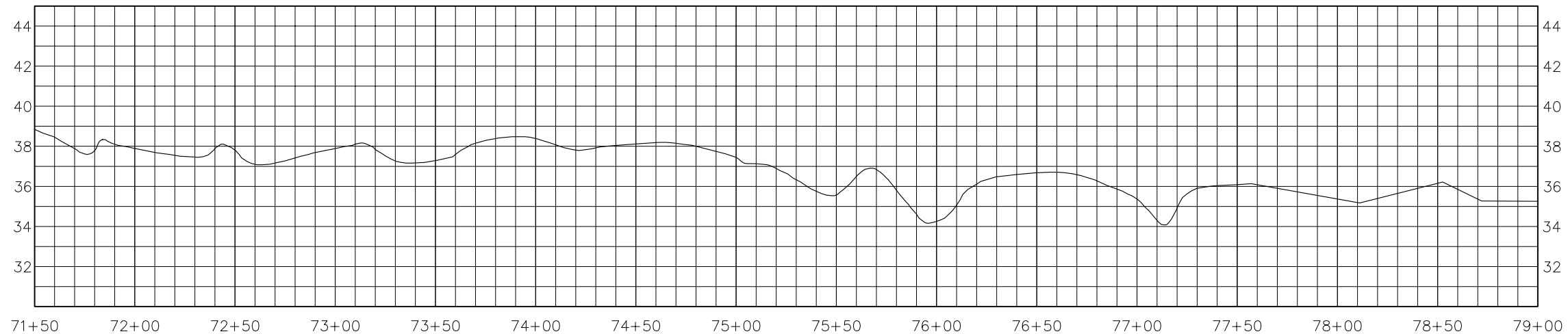
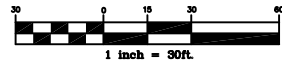
ENVIRONMENTAL BANC & EXCHANGE, LLC  
FLOOGIE MITIGATION PROJECT  
BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
STA. 64+00 TO STA. 71+50

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- LEGEND**
- EXISTING CONTOURS ————
  - CENTERLINE OF EXISTING DITCH ————
  - BOTTOM OF BANK ———— BB ————
  - TOP OF BANK ———— TB ————
  - LIMITS OF CONSERVATION EASMENT ———— LCE ————
  - LOG RAMP 
  - LOG GRADE CONTROL 
  - LOG TOE PROTECTION 
  - LOG VANE 
  - FORD CROSSING 
  - ROOT WAD 
  - CHANNEL PLUG 
  - WETLAND CHANNEL PLUG 
  - EXISTING WETLANDS 
  - BEDDED LOG STRUCTURE 
  - SMALL WOODY DEBRIS 



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER: DPI  
 DRAWN BY: JLL  
 APPROVED BY: DPI  
 FILE NAME: design.dwg  
 DRAWING SCALE: 1" = 30'  
 PROJECT DATE: 08/2007  
 PROJECT NUMBER: 5043100RA  
 PLOT DATE: 03/28/08



720 CORPORATE CENTER DRIVE  
 RALEIGH, NC 27607  
 (919) 782-0495  
 Office Locations: North Carolina, Georgia, South Carolina

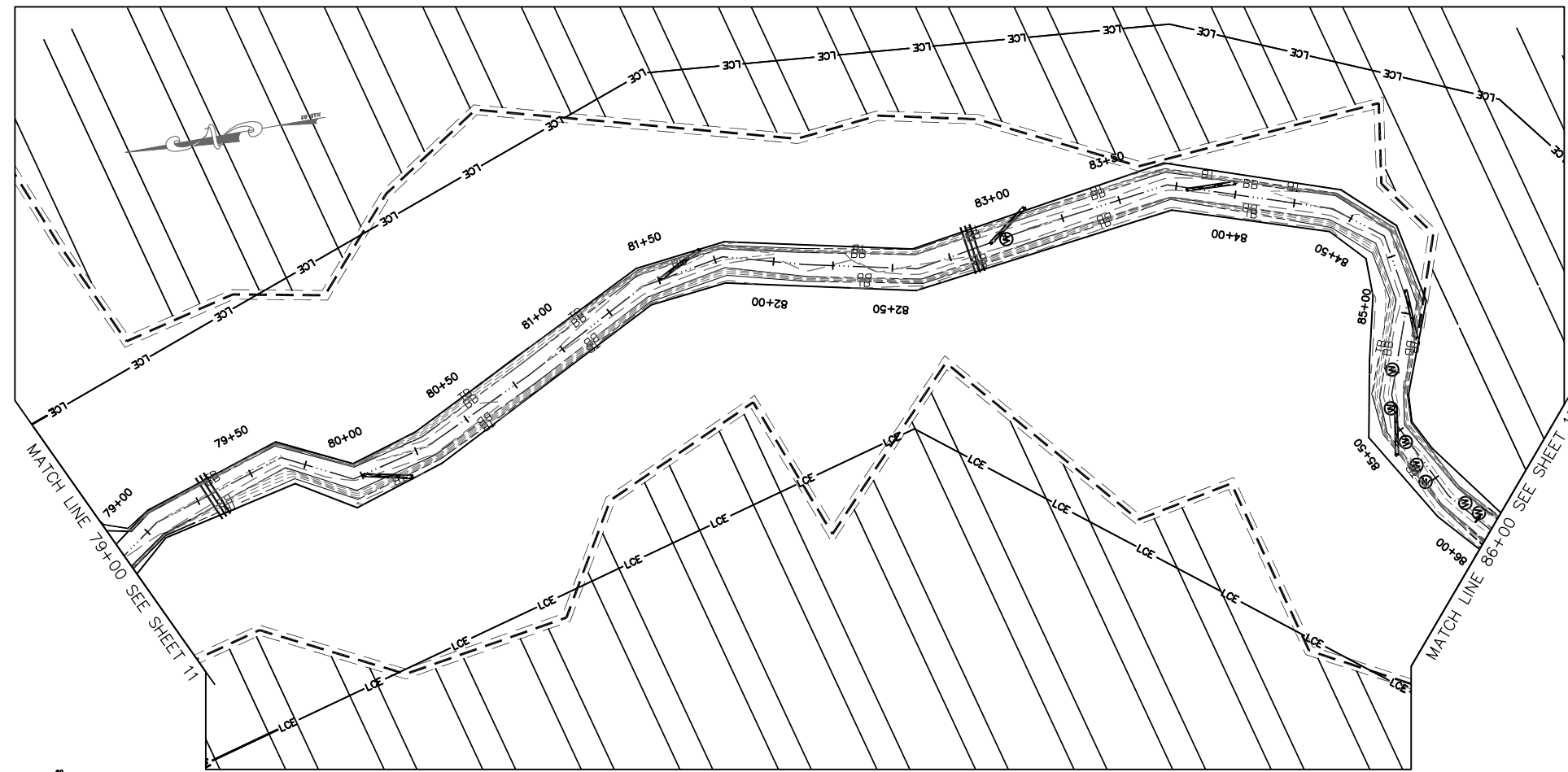
RELEASED FOR	DATE
APPROVALS	
BIDDING	
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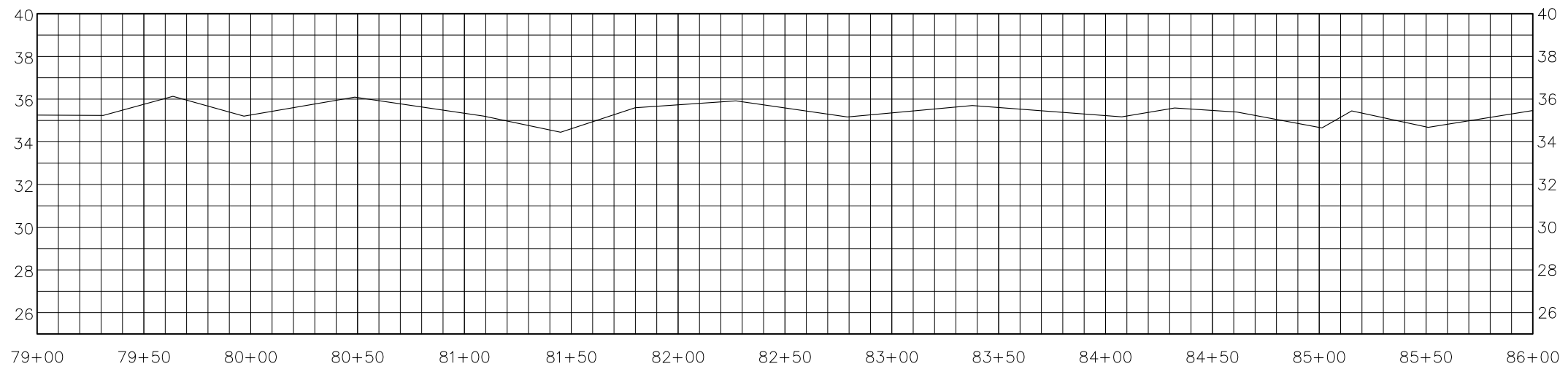
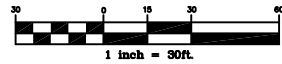
ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 71+50 TO STA. 79+00

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LEGEND	
EXISTING CONTOURS	--- ---
CENTERLINE OF EXISTING DITCH	— — — —
BOTTOM OF BANK	--- BB ---
TOP OF BANK	--- TB ---
LIMITS OF CONSERVATION EASEMENT	— LCE —
LOG RAMP	[Symbol]
LOG GRADE CONTROL	[Symbol]
LOG TOE PROTECTION	[Symbol]
LOG VANE	[Symbol]
FORD CROSSING	[Symbol]
ROOT WAD	[Symbol]
CHANNEL PLUG	[Symbol]
WETLAND CHANNEL PLUG	[Symbol]
EXISTING WETLANDS	[Symbol]
BEDDED LOG STRUCTURE	[Symbol]
SMALL WOODY DEBRIS	[Symbol]



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER DPI	DRAWING SCALE 1" = 30'
DRAWN BY JLL	PROJECT DATE 08/2007
APPROVED BY DPI	PROJECT NUMBER 5043100RA
FILE NAME design.dwg	PLOT DATE 03/28/08



720 CORPORATE CENTER DRIVE  
 RALEIGH, NC 27607  
 (919) 782-0495  
 Office Locations: North Carolina, Georgia, South Carolina

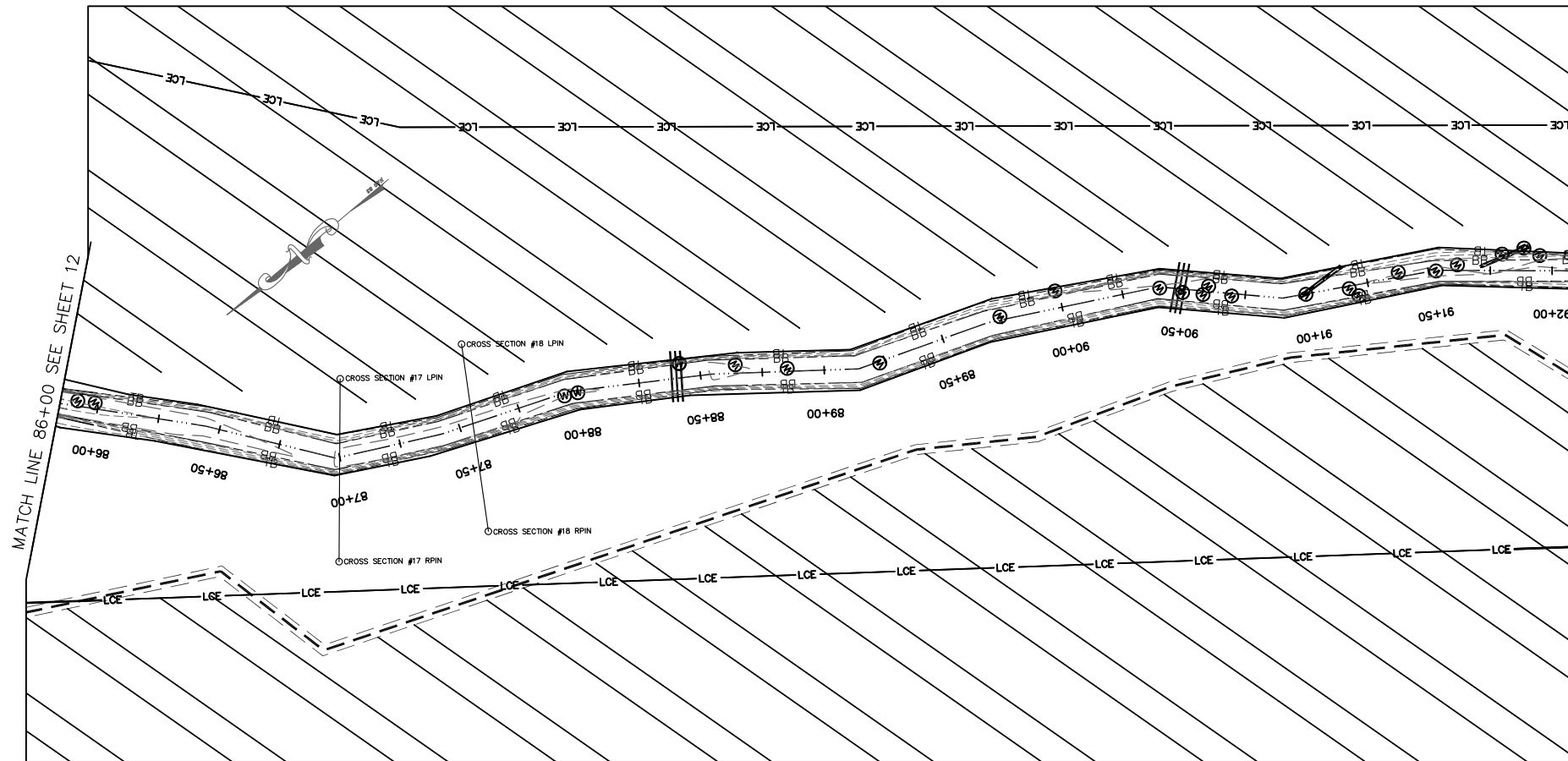
RELEASED FOR	DATE
APPROVALS	
BIDDING	
CONSTRUCTION	
RECORD DWG.	



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

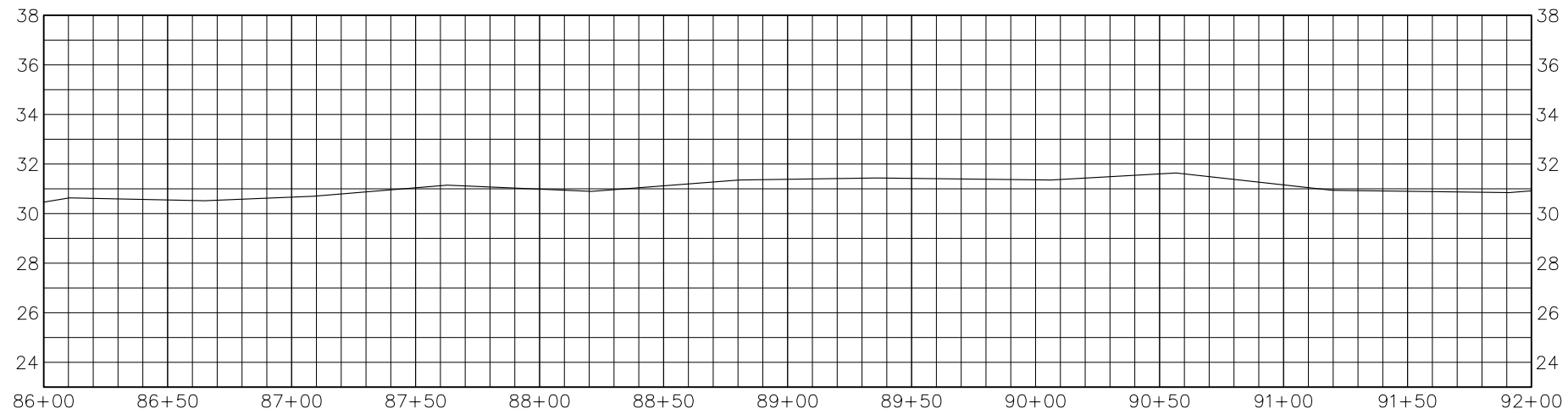
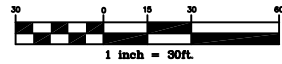
FLOOGIE AS-BUILT PLANS  
 STA. 79+00 TO STA. 86+00

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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	.....
BOTTOM OF BANK	BB
TOP OF BANK	TB
LIMITS OF CONSERVATION EASEMENT	LCE
LOG RAMP	[Symbol]
LOG GRADE CONTROL	[Symbol]
LOG TOE PROTECTION	[Symbol]
LOG VANE	[Symbol]
FORD CROSSING	[Symbol]
ROOT WAD	[Symbol]
CHANNEL PLUG	[Symbol]
WETLAND CHANNEL PLUG	[Symbol]
EXISTING WETLANDS	[Symbol]
BEDDED LOG STRUCTURE	[Symbol]
SMALL WOODY DEBRIS	[Symbol]



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

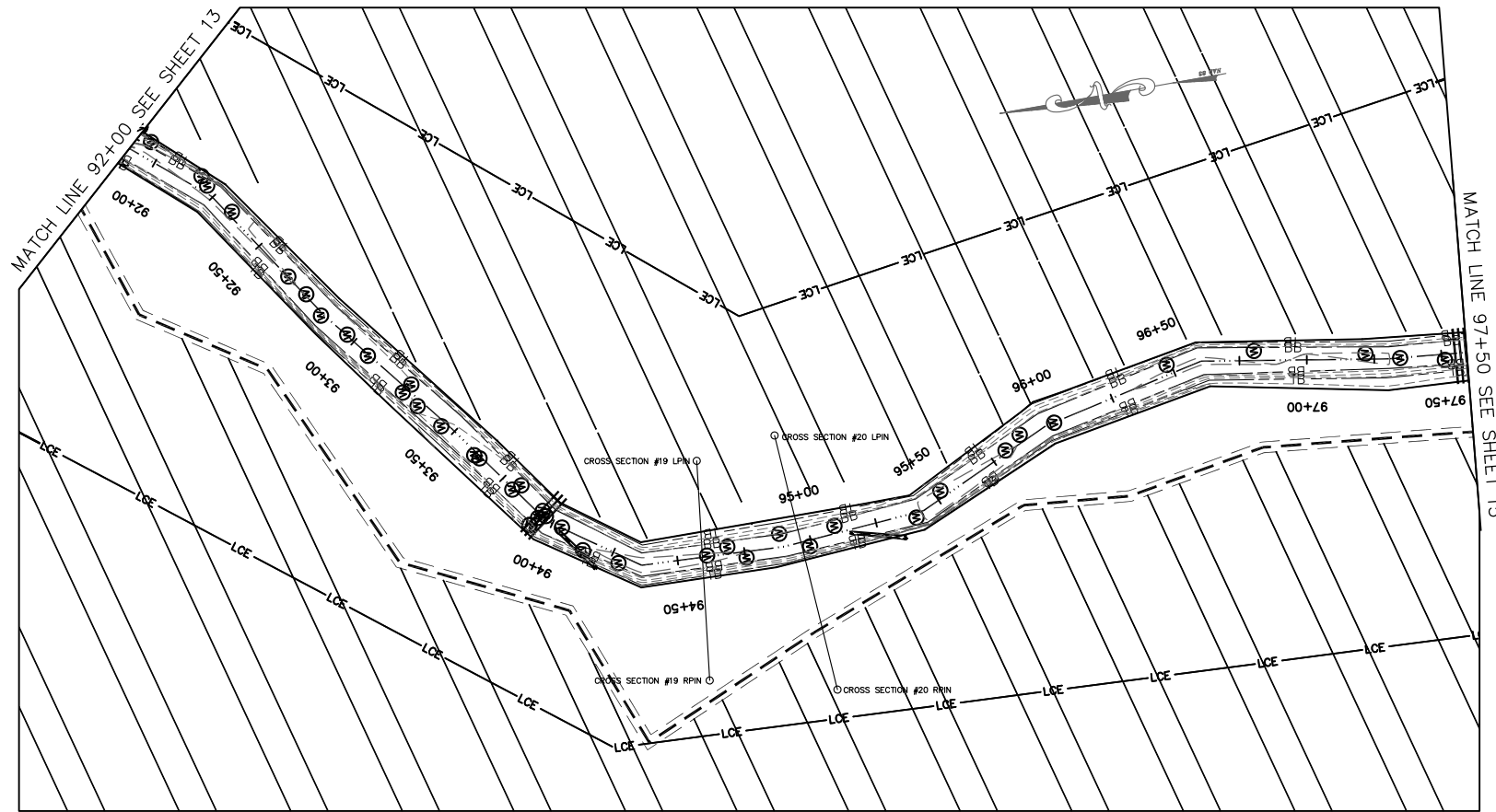
PROJECT MANAGER DPI DRAWN BY JLL APPROVED BY DPI FILE NAME design.dwg	DRAWING SCALE 1" = 30' PROJECT DATE 08/2007 PROJECT NUMBER 5043100RA PLOT DATE 03/28/08	 community infrastructure consultants	720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495 Office Locations: North Carolina South Carolina Georgia	RELEASED FOR APPROVALS BIDDING CONSTRUCTION RECORD DWG.	DATE     
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ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

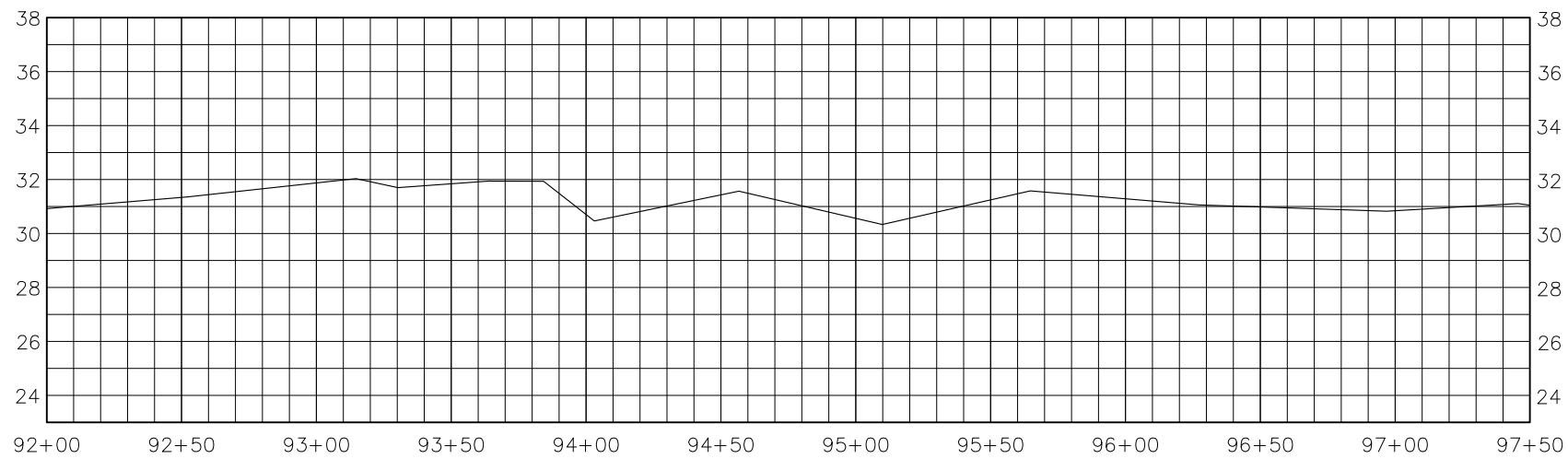
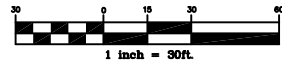
FLOOGIE AS-BUILT PLANS  
 STA. 86+00 TO STA. 92+00

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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	---
BOTTOM OF BANK	BB ---
TOP OF BANK	TB ---
LIMITS OF CONSERVATION EASEMENT	LCE ---
LOG RAMP	
LOG GRADE CONTROL	
LOG TOE PROTECTION	
LOG VANE	
FORD CROSSING	
ROOT WAD	
CHANNEL PLUG	
WETLAND CHANNEL PLUG	
EXISTING WETLANDS	
BEDDED LOG STRUCTURE	
SMALL WOODY DEBRIS	



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER DPI DRAWN BY JLL APPROVED BY DPI FILE NAME design.dwg	DRAWING SCALE 1" = 30' PROJECT DATE 08/2007 PROJECT NUMBER 5043100RA PLOT DATE 03/28/08	 community infrastructure consultants 720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495 Office Locations: North Carolina South Carolina Georgia	RELEASED FOR APPROVALS BIDDING CONSTRUCTION RECORD DWG.	DATE     
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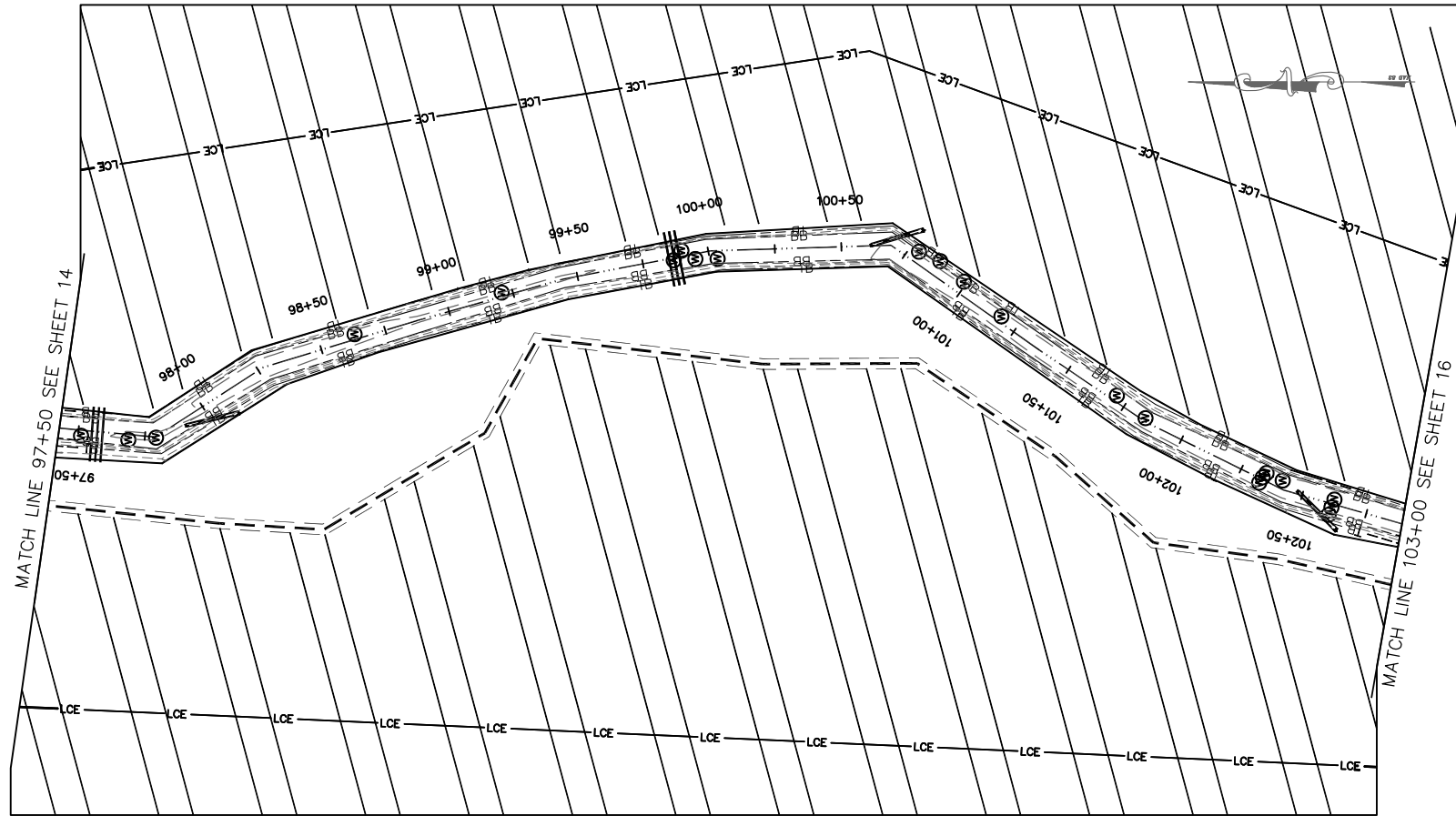


ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 92+00 TO STA. 97+50

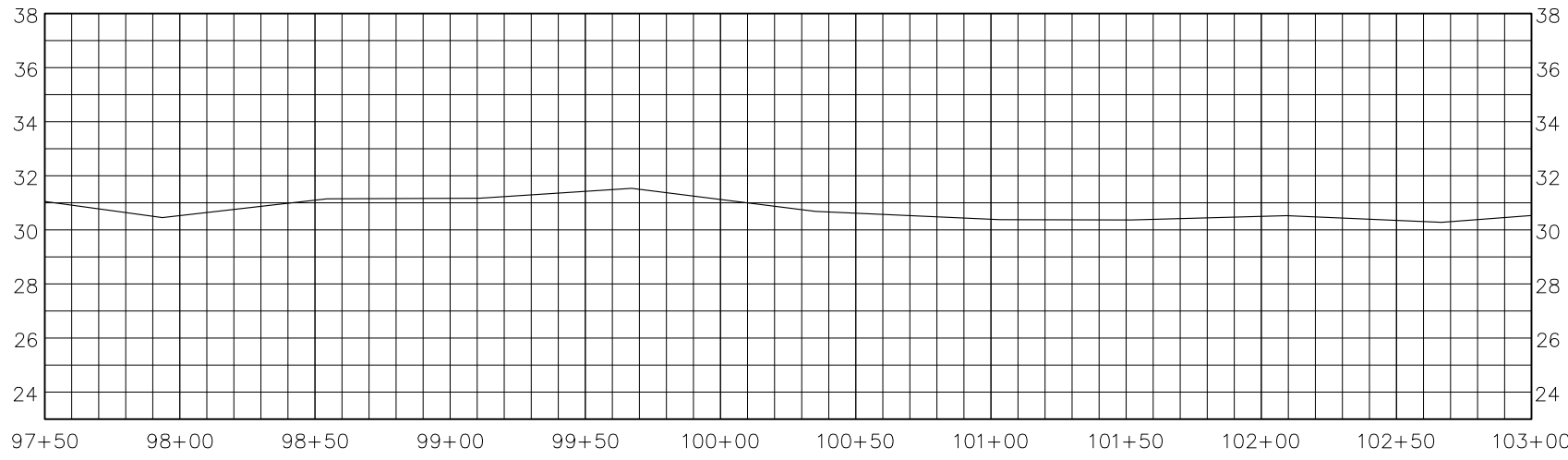
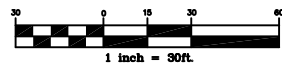


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**LEGEND**

EXISTING CONTOURS	---
CENTERLINE OF EXISTING DITCH	----
BOTTOM OF BANK	BB
TOP OF BANK	TB
LIMITS OF CONSERVATION EASEMENT	LCE
LOG RAMP	
LOG GRADE CONTROL	
LOG TOE PROTECTION	
LOG VANE	
FORD CROSSING	
ROOT WAD	
CHANNEL PLUG	
WETLAND CHANNEL PLUG	
EXISTING WETLANDS	
BEDDED LOG STRUCTURE	
SMALL WOODY DEBRIS	



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

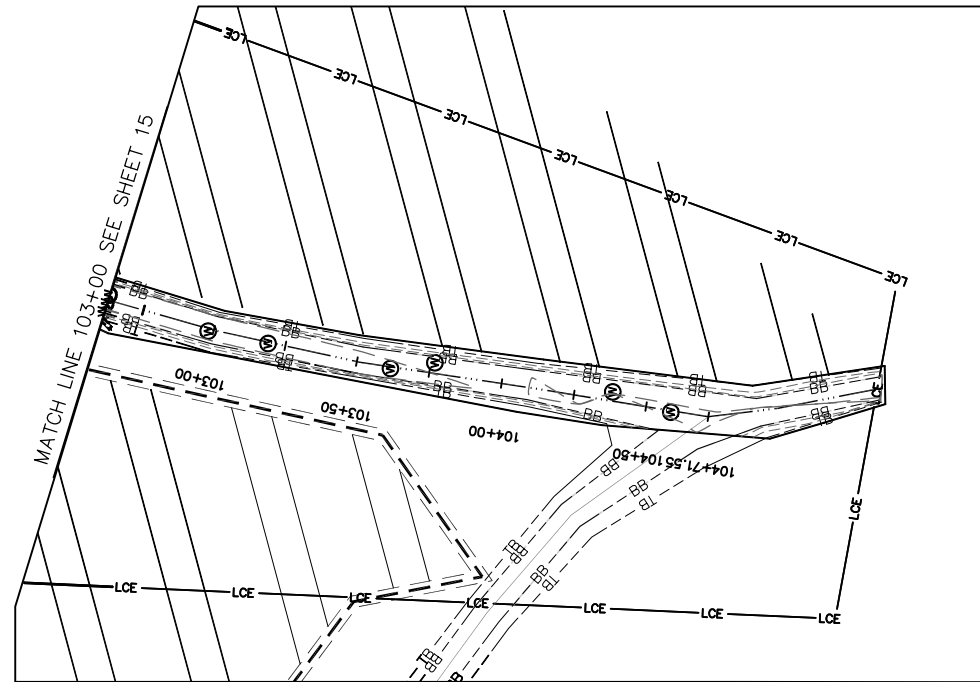
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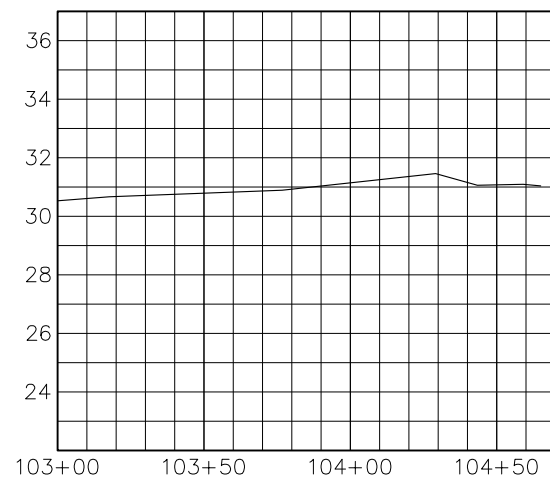
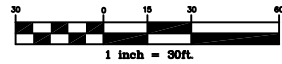
ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 97+50 TO STA. 103+00

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- LEGEND**
- EXISTING CONTOURS ———
  - CENTERLINE OF EXISTING DITCH ———
  - BOTTOM OF BANK ——— BB ———
  - TOP OF BANK ——— TB ———
  - LIMITS OF CONSERVATION EASMENT ——— LCE ———
  - LOG RAMP
  - LOG GRADE CONTROL
  - LOG TOE PROTECTION
  - LOG VANE
  - FORD CROSSING
  - ROOT WAD
  - CHANNEL PLUG
  - WETLAND CHANNEL PLUG
  - EXISTING WETLANDS
  - BEDDED LOG STRUCTURE
  - SMALL WOODY DEBRIS



Horizontal Scale: 1 inch = 30ft.  
 Vertical Scale: 1 inch = 3ft.

REV. NO.	DESCRIPTION	DATE

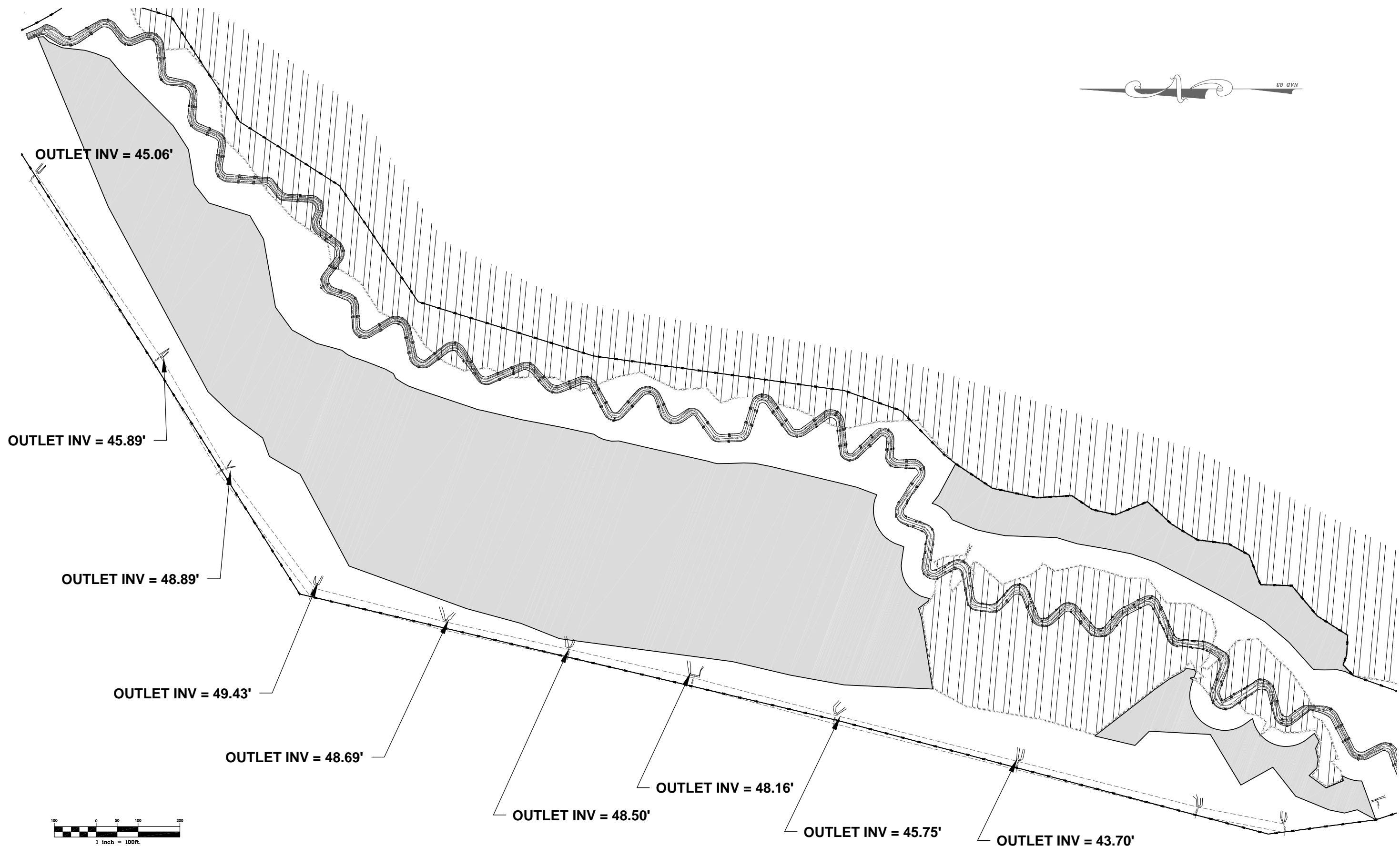
PROJECT MANAGER DPI	DRAWING SCALE 1" = 30'	 community infrastructure consultants	720 CORPORATE CENTER DRIVE RALEIGH, NC 27607 (919) 782-0495	RELEASED FOR APPROVALS	DATE
DRAWN BY JLL	PROJECT DATE 08/2007		Office Locations: North Carolina South Carolina	BIDDING	
APPROVED BY DPI	PROJECT NUMBER 5043100RA	Georgia	CONSTRUCTION		
FILE NAME design.dwg	PLOT DATE 03/28/08		RECORD DWG.		



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 STA. 103+00 TO STA. 104+71.55

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REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER: DPI  
 DRAWN BY: JLL  
 APPROVED BY: DPI  
 FILE NAME: design.dwg



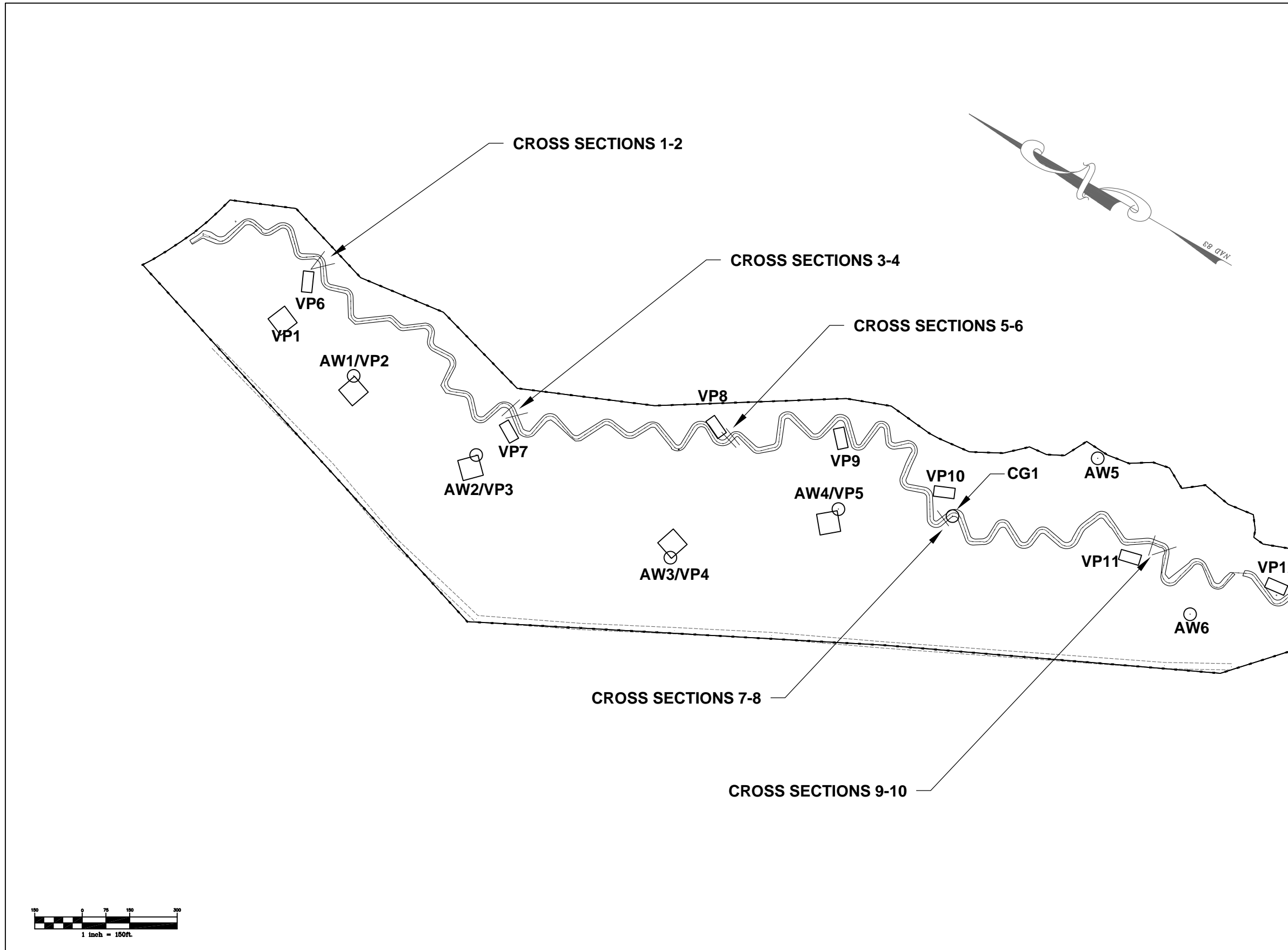
720 CORPORATE CENTER DRIVE  
 RALEIGH, NC 27607  
 (919) 782-0495  
 Office Locations: North Carolina, Georgia, South Carolina



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 WETLAND CONDITIONS

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REV. NO.	DESCRIPTION	DATE

PROJECT MANAGER: DPI  
 DRAWN BY: JLL  
 APPROVED BY: DPI  
 FILE NAME: design.dwg  
 DRAWING SCALE: 1" = 150'  
 PROJECT DATE: 08/2007  
 PROJECT NUMBER: 5043100RA  
 PLOT DATE: 03/28/08



720 CORPORATE CENTER DRIVE  
 RALEIGH, NC 27607  
 (919) 782-0495  
 Office Locations:  
 North Carolina Georgia  
 South Carolina

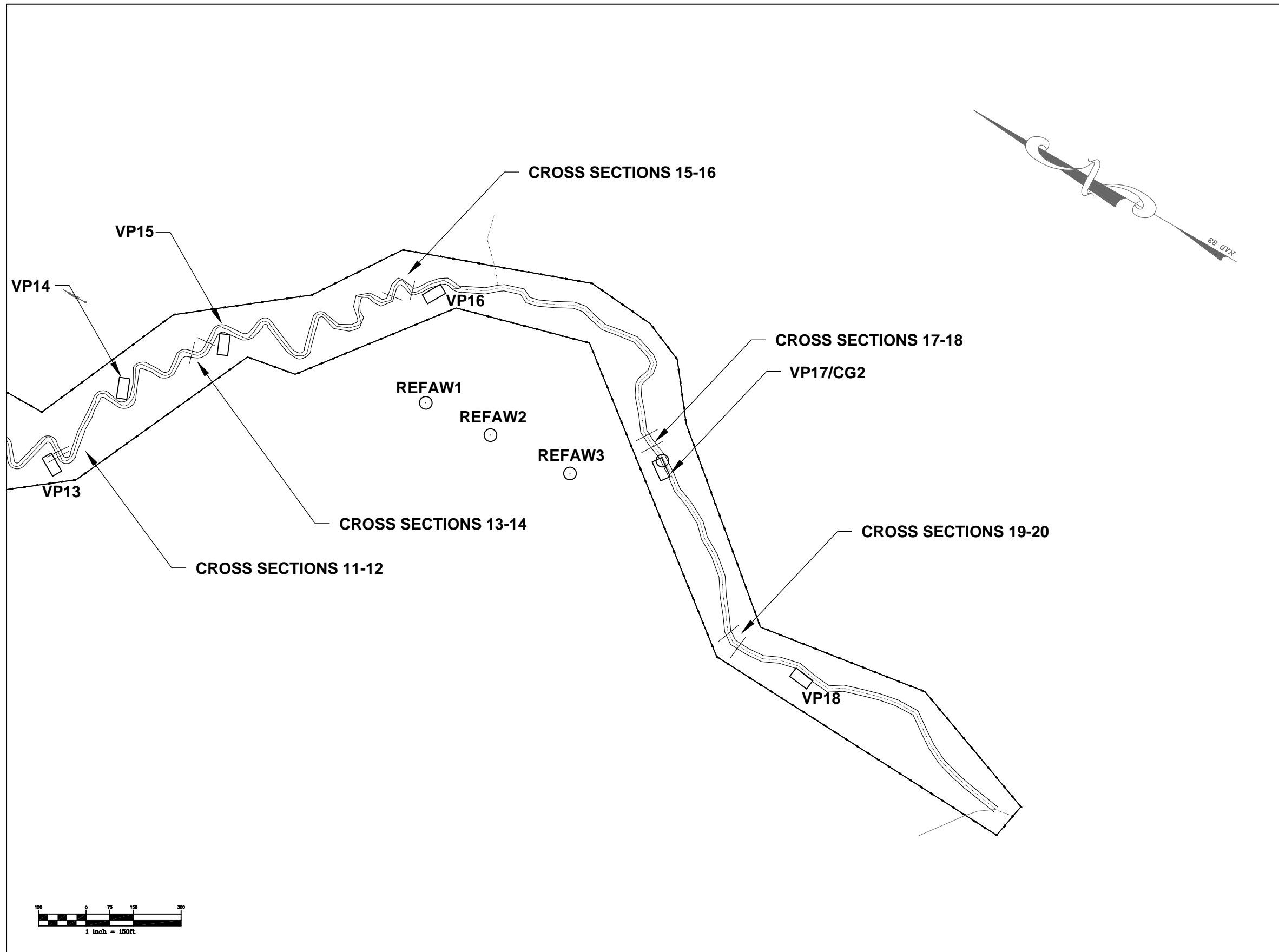
RELEASED FOR	DATE
APPROVALS	
BIDDING	
CONSTRUCTION	
RECORD DWG.	



ENVIRONMENTAL BANC & EXCHANGE, LLC  
 FLOOGIE MITIGATION PROJECT  
 BERTIE COUNTY, NORTH CAROLINA

FLOOGIE AS-BUILT PLANS  
 MONITORING OVERVIEW

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REV. NO.	DESCRIPTION	DATE

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DRAWN BY JLL	PROJECT DATE 08/2007
APPROVED BY DPI	PROJECT NUMBER 5043100RA
FILE NAME design.dwg	PLOT DATE 03/28/08



720 CORPORATE CENTER DRIVE  
RALEIGH, NC 27607  
(919) 782-0495

Office Locations:  
North Carolina Georgia  
South Carolina

RELEASED FOR	DATE
APPROVALS	
BIDDING	
CONSTRUCTION	
RECORD DWG.	



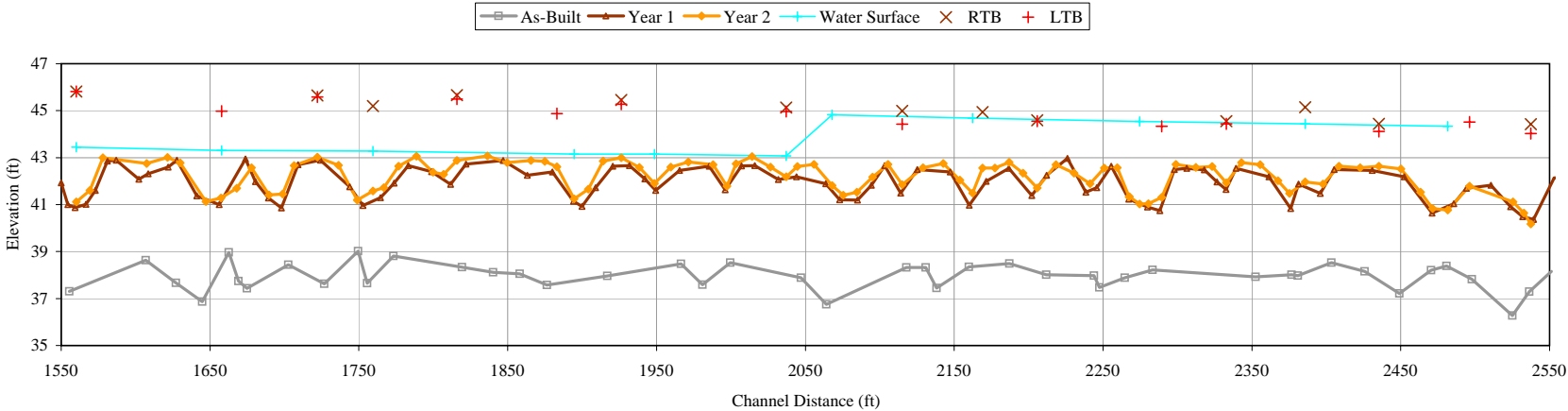
ENVIRONMENTAL BANC & EXCHANGE, LLC  
FLOGGIE MITIGATION PROJECT  
BERTIE COUNTY, NORTH CAROLINA

FLOGGIE AS-BUILT PLANS  
MONITORING OVERVIEW

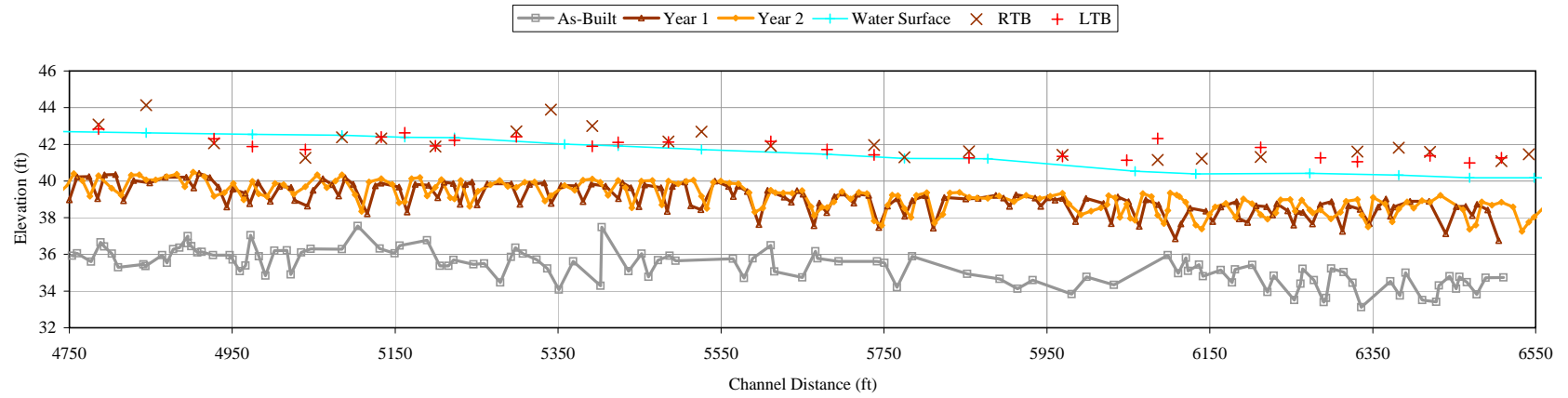
# **APPENDIX B**

## **2009 Profile and Cross Section Data**

Floogie  
Reach 1-2 STA. 15+50 - STA. 25+50

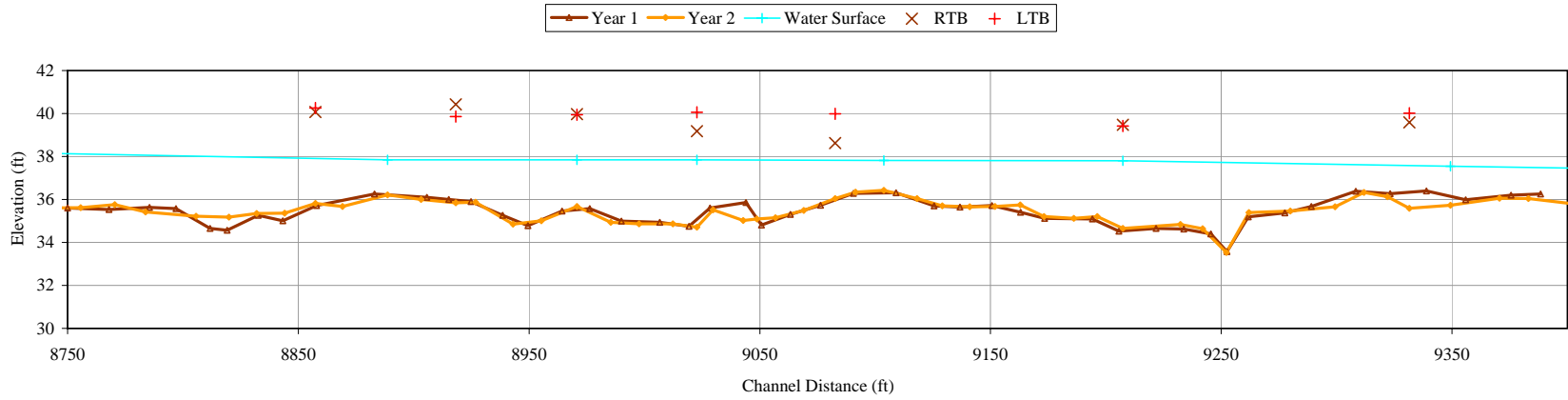


Floogie  
Reach 3 STA. 47+50 - STA. 65+00





Floogie  
Reach 4 STA. 87+50 - STA. 94+50

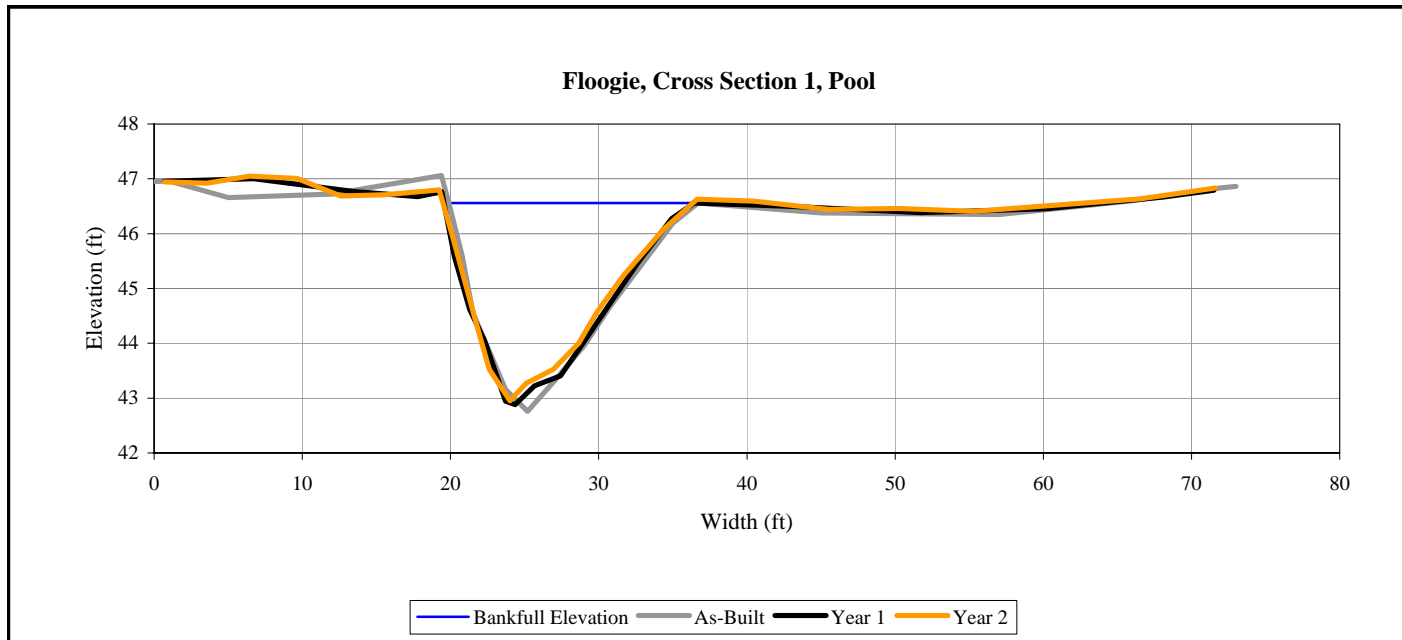




Left bank



Right bank

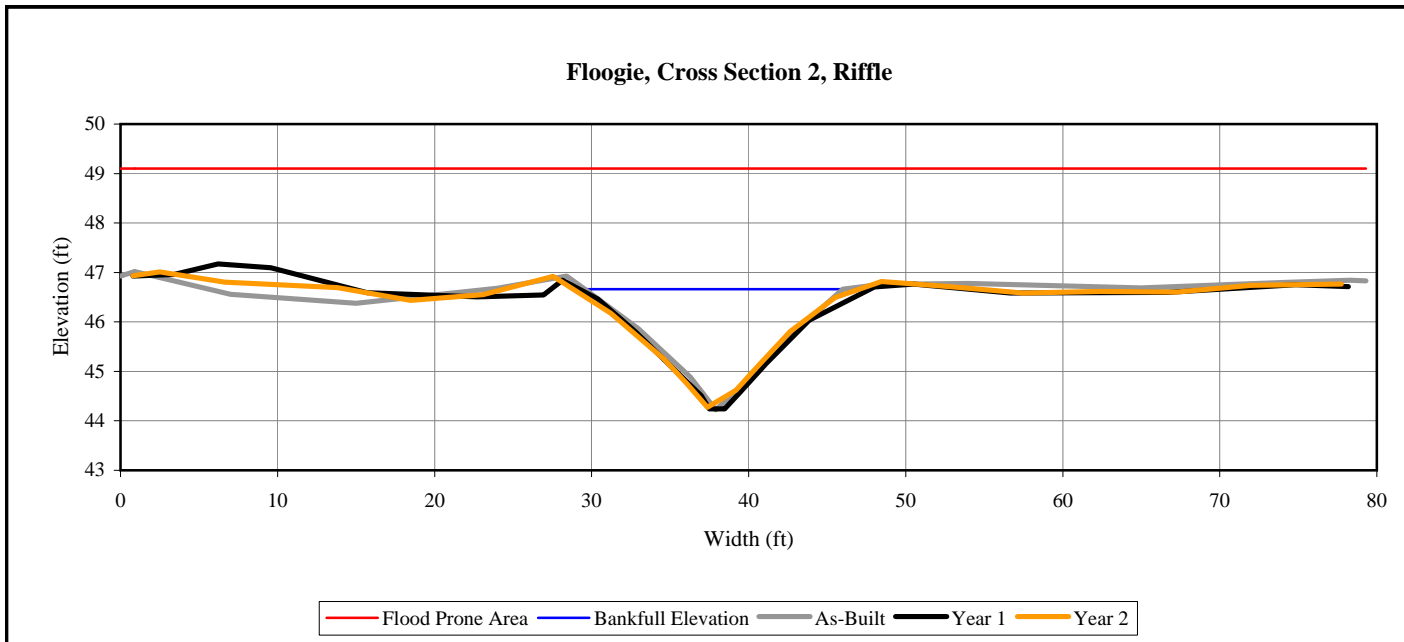




Left bank



Right bank

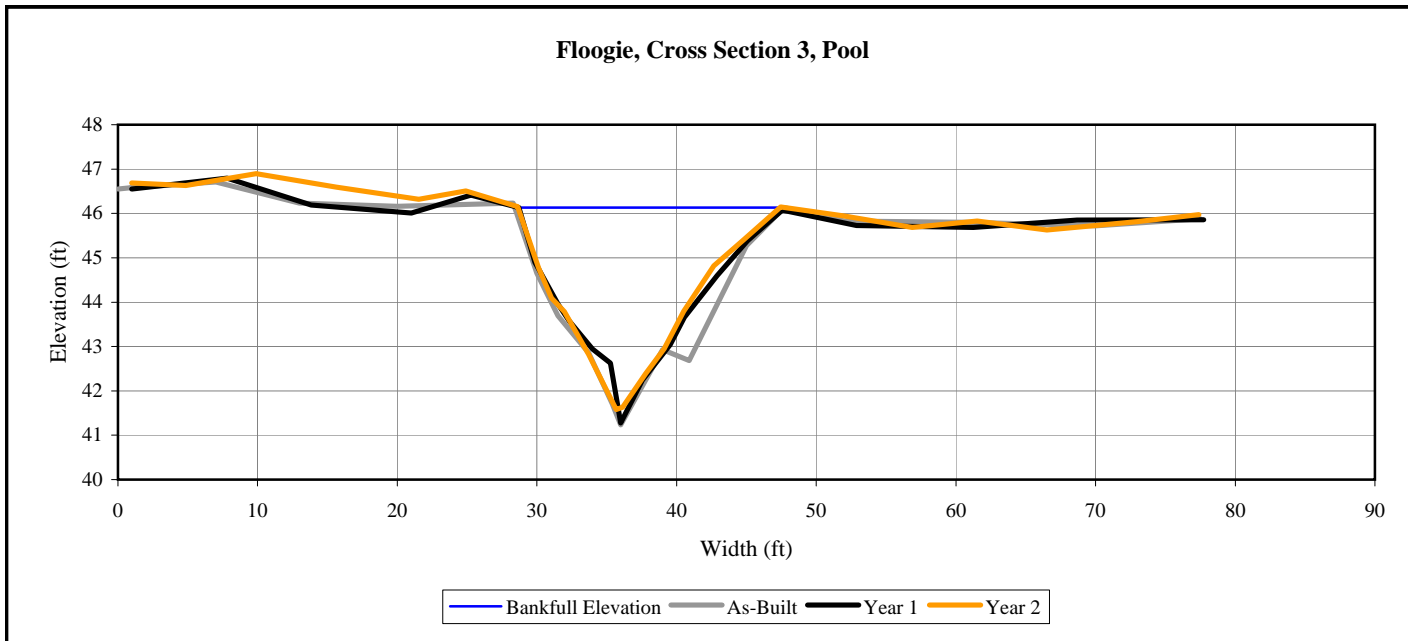




Left bank

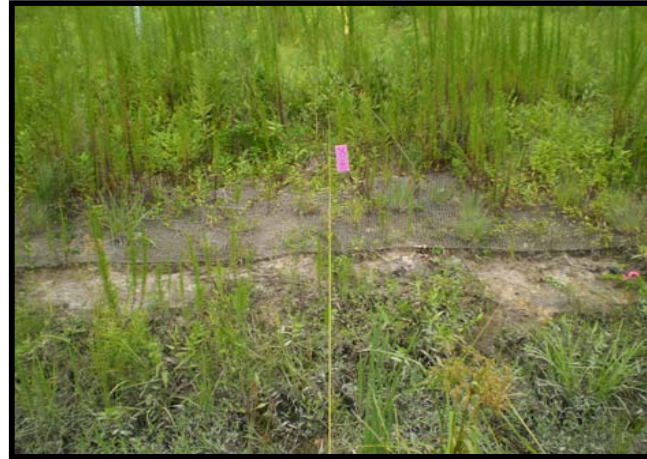


Right bank

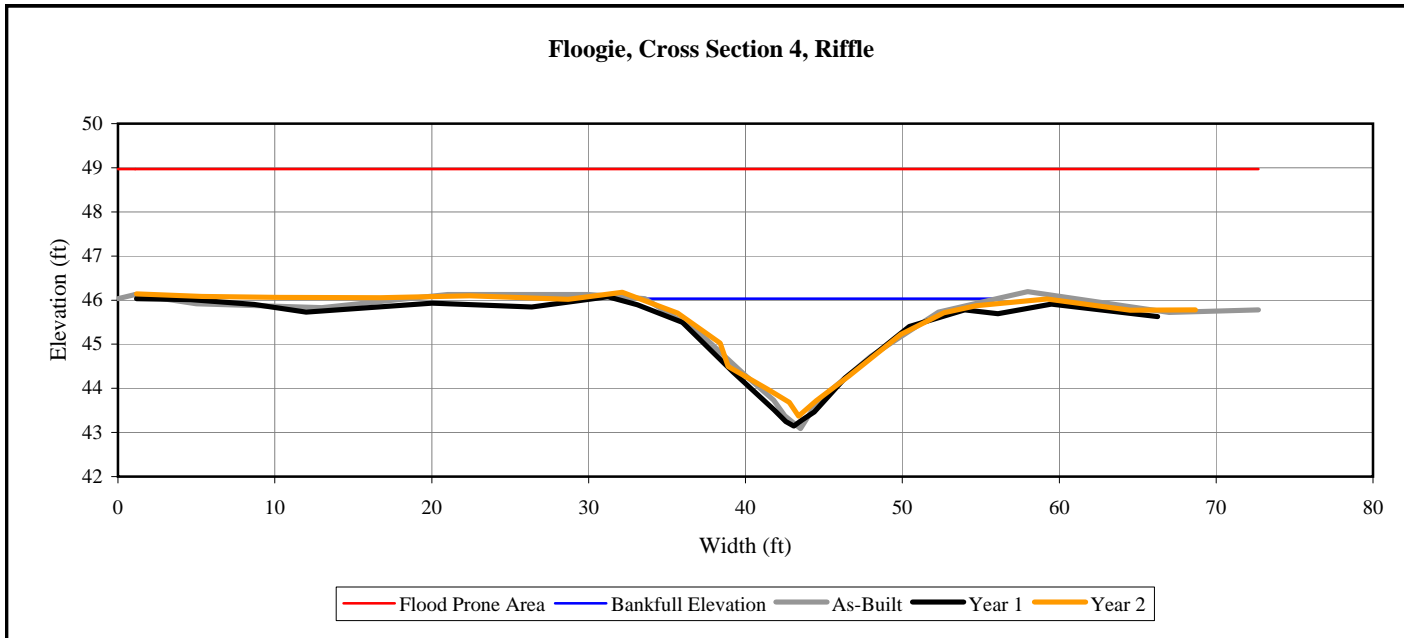




Left bank



Right bank

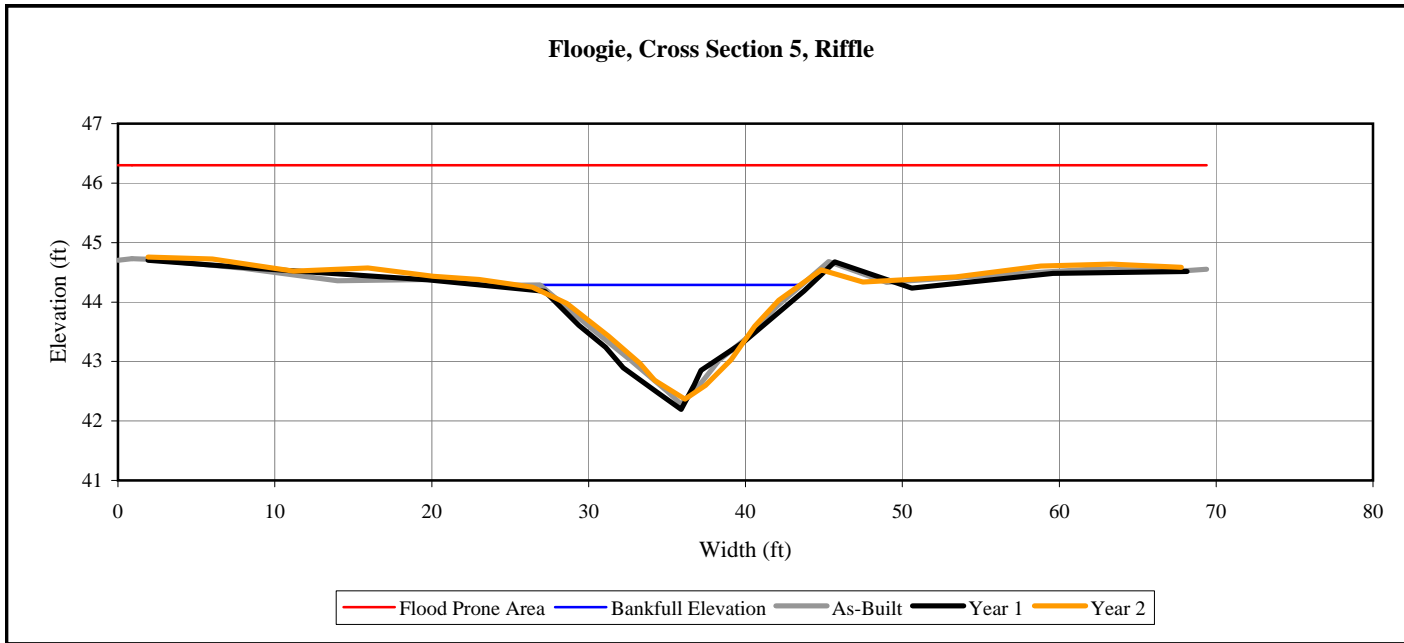




Left bank



Right bank

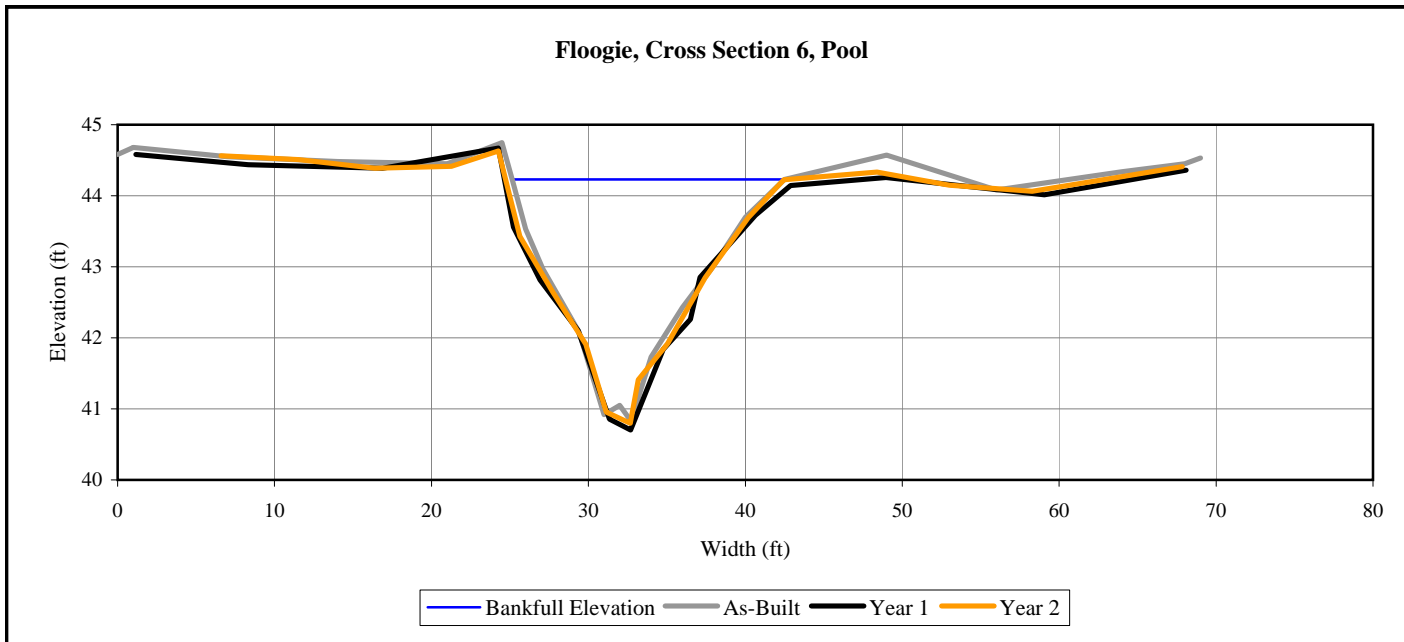




Left bank



Right bank

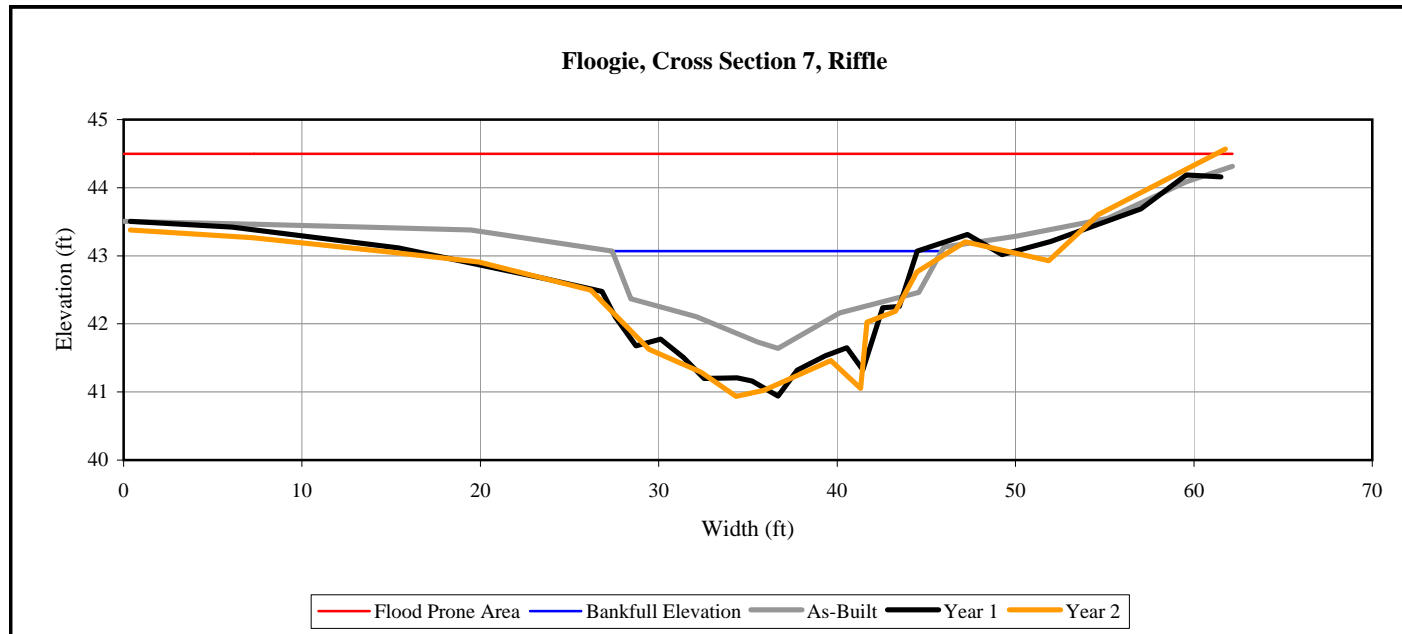




Left bank



Right bank



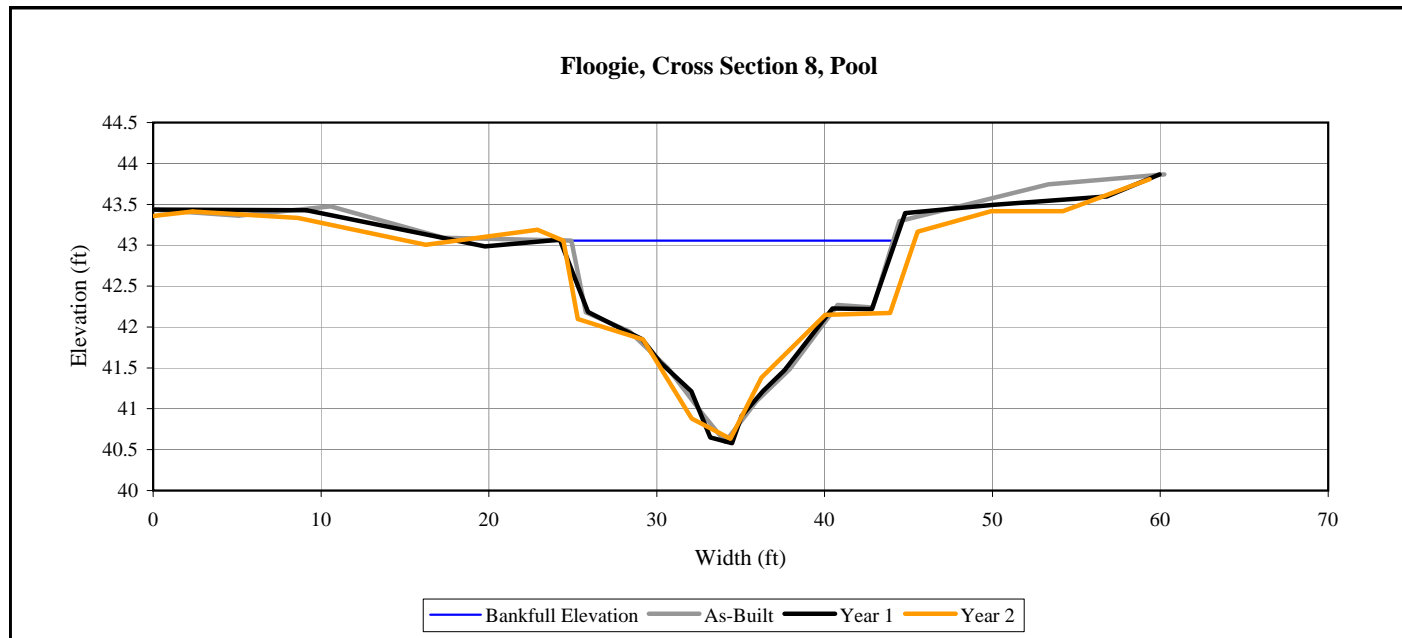




Left bank



Right bank

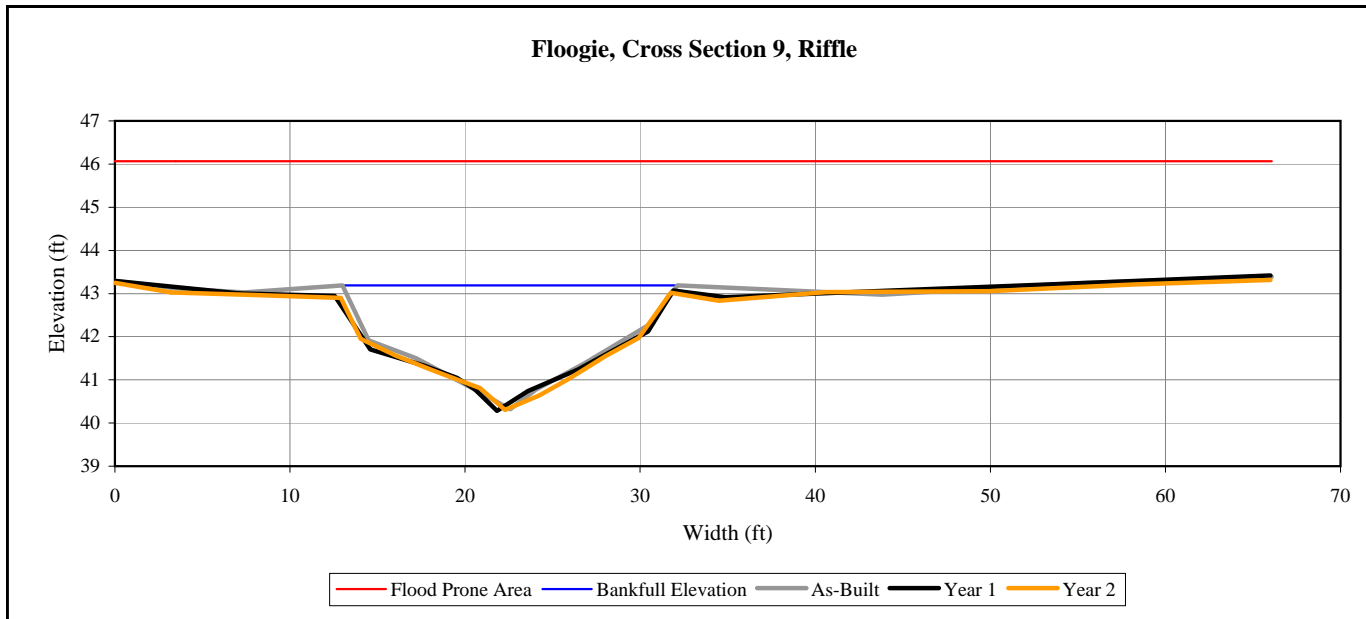




Left bank



Right bank

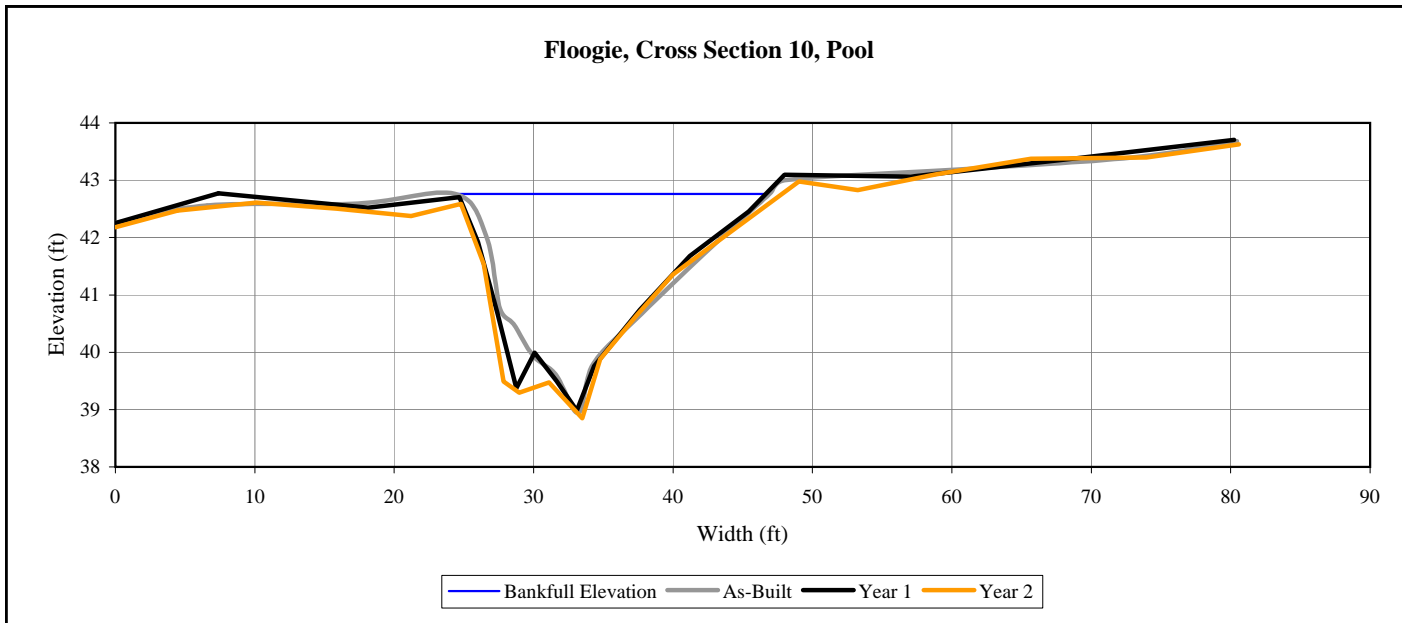


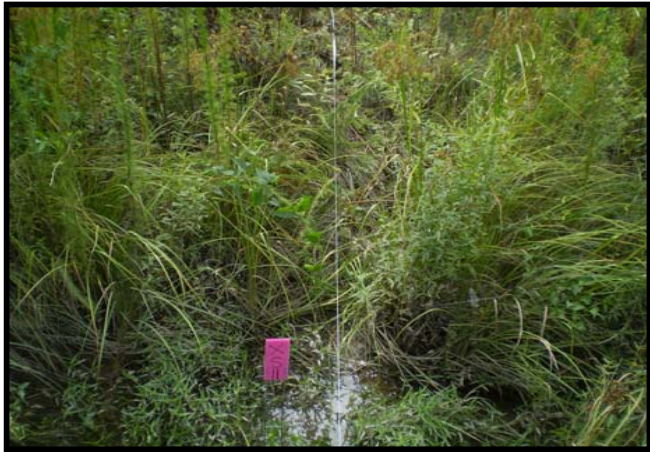


Left bank



Right bank

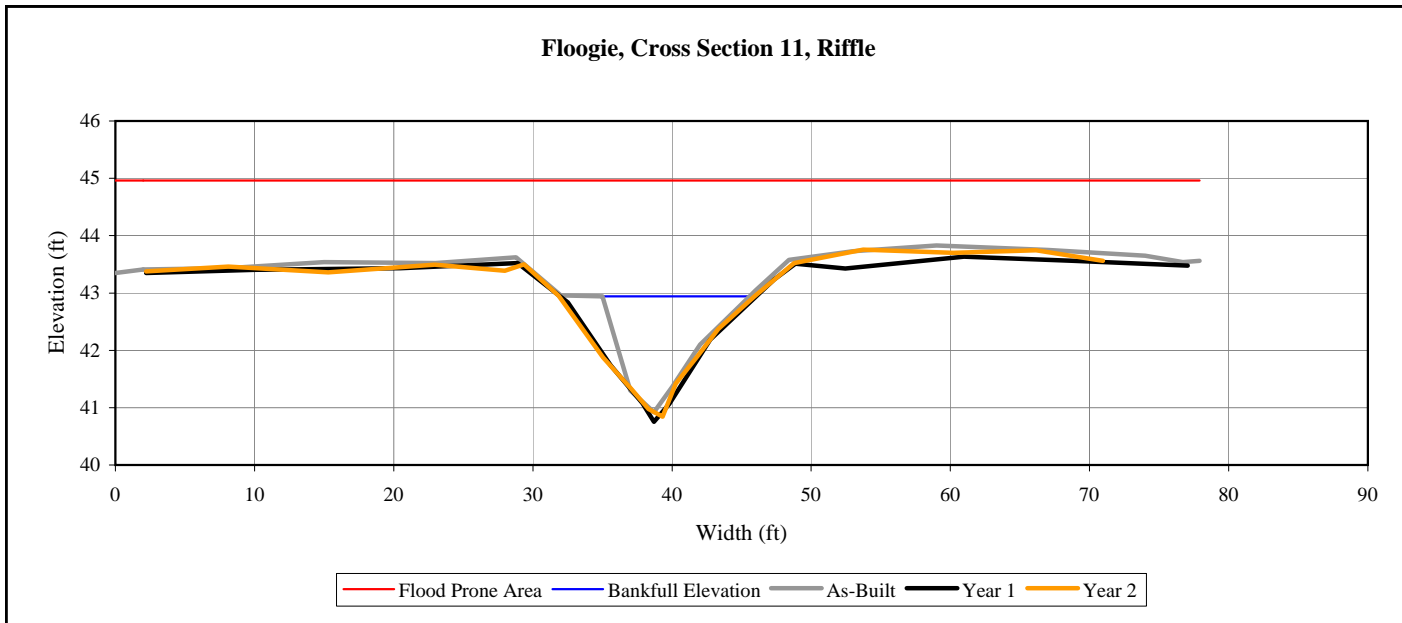




Left bank



Right bank

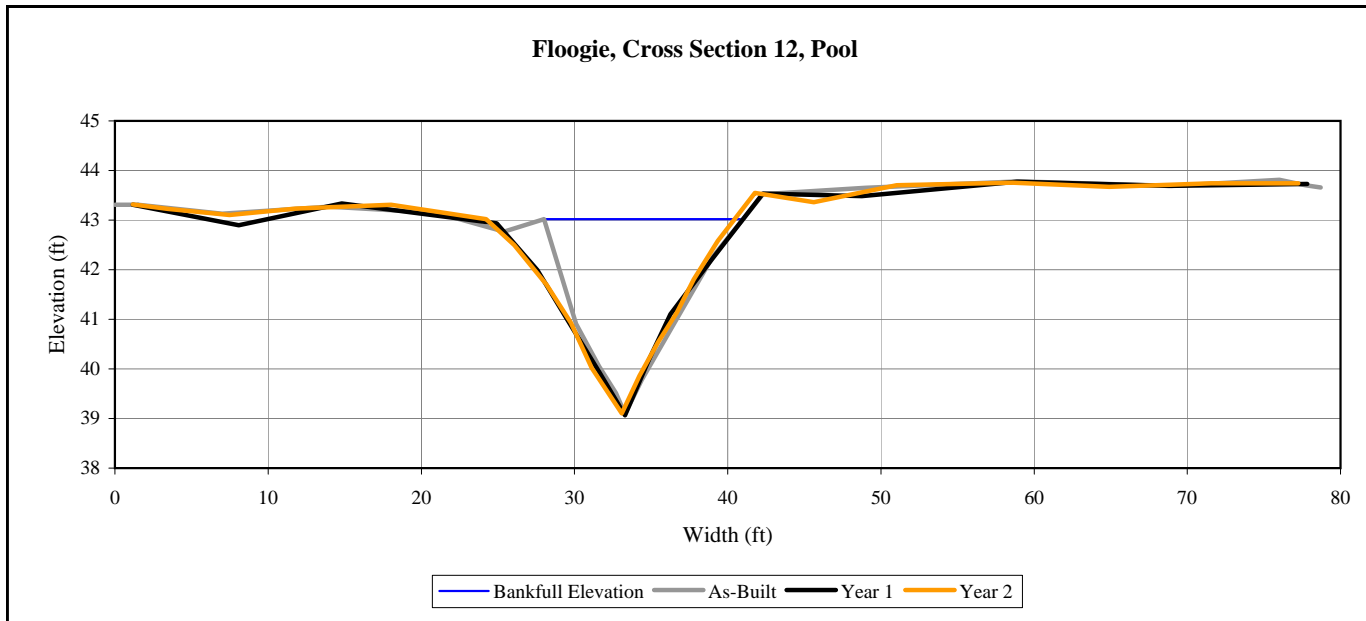




Left bank



Right bank

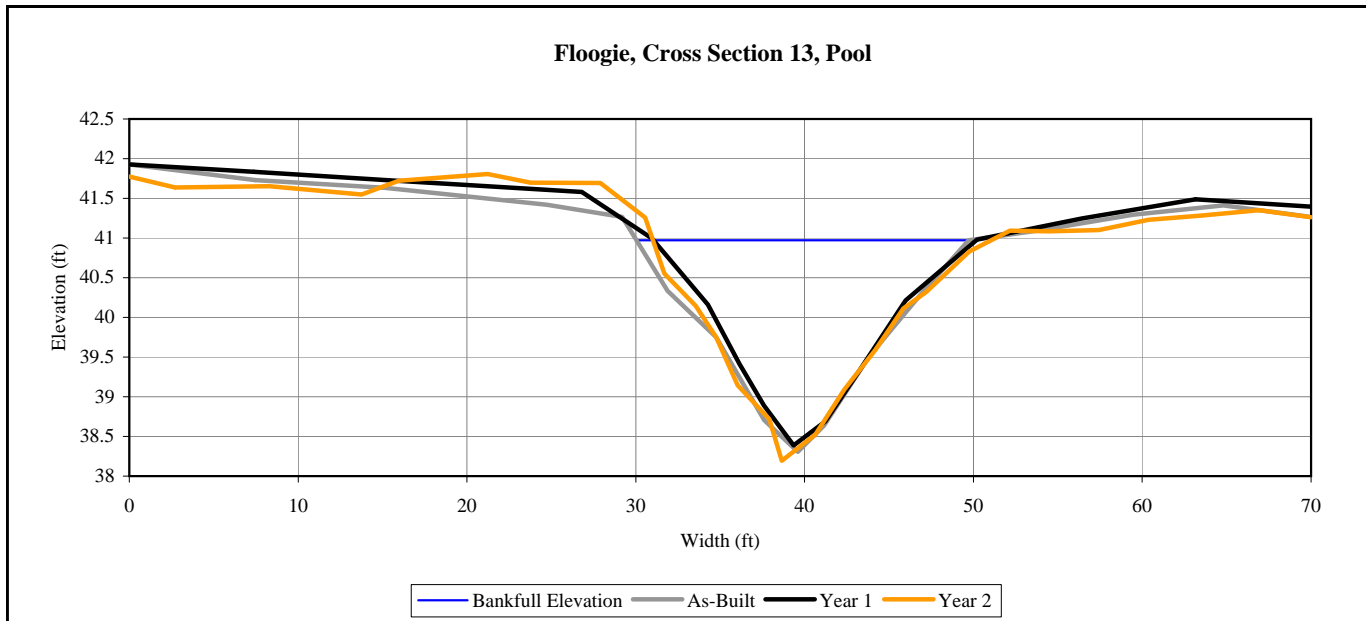




Left bank



Right bank

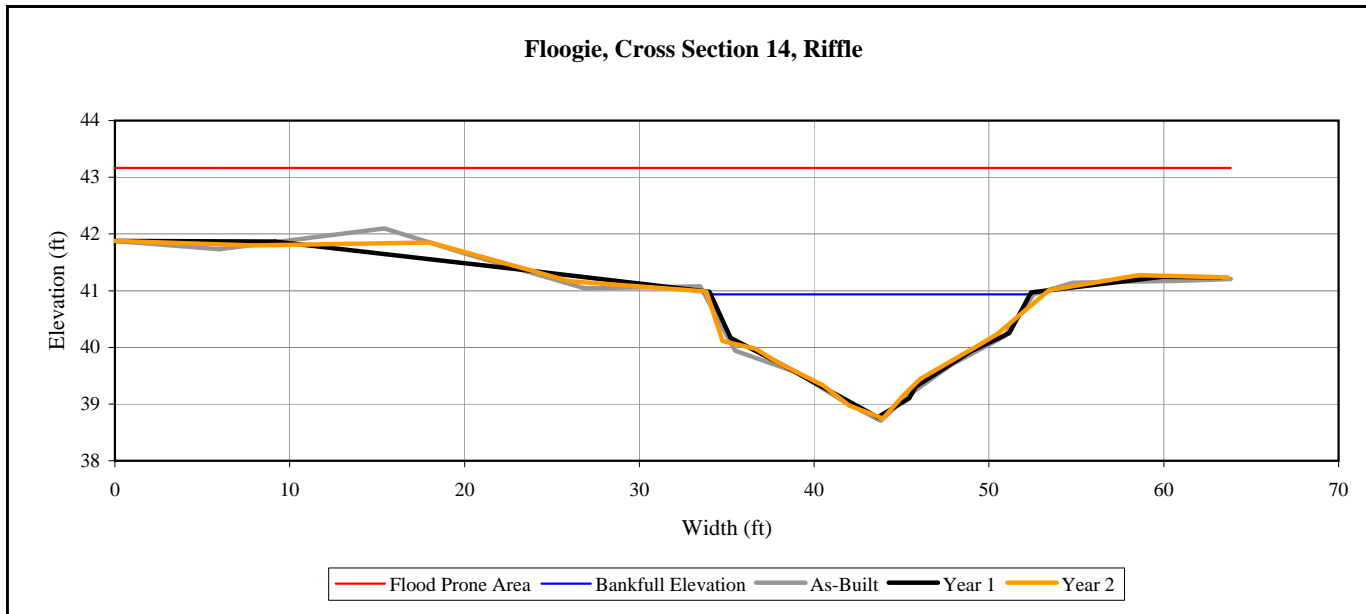




Left bank



Right bank

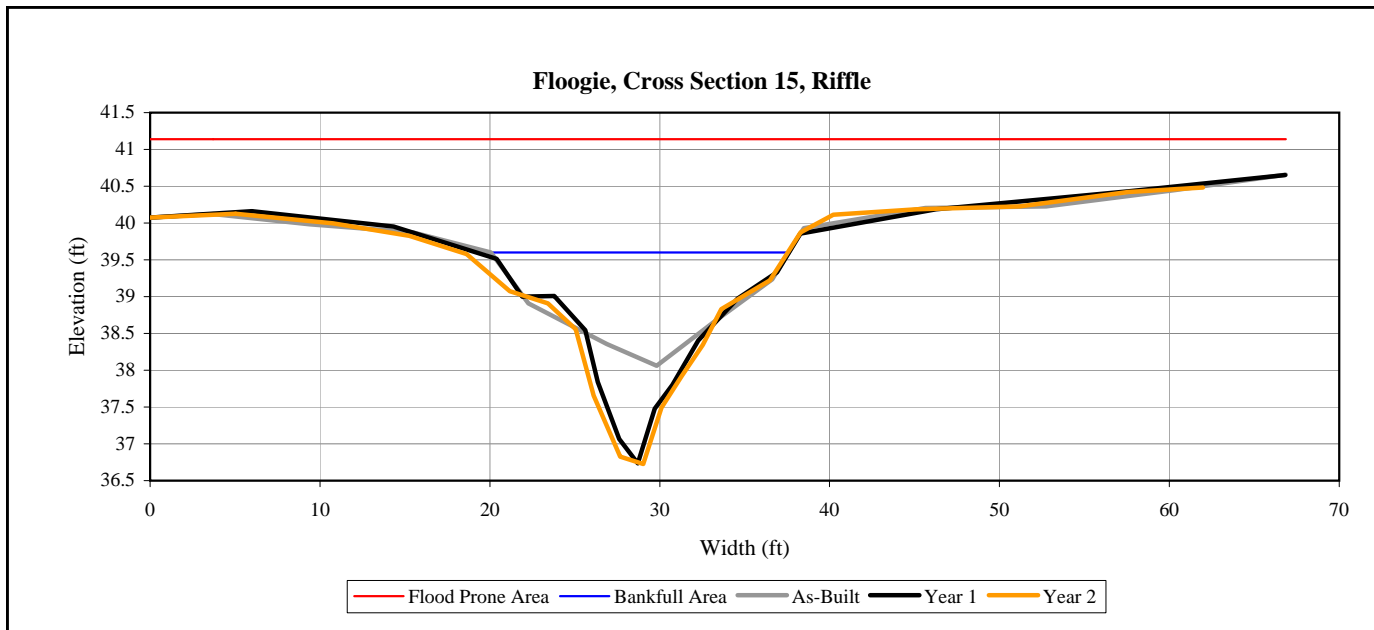




Left bank



Right bank



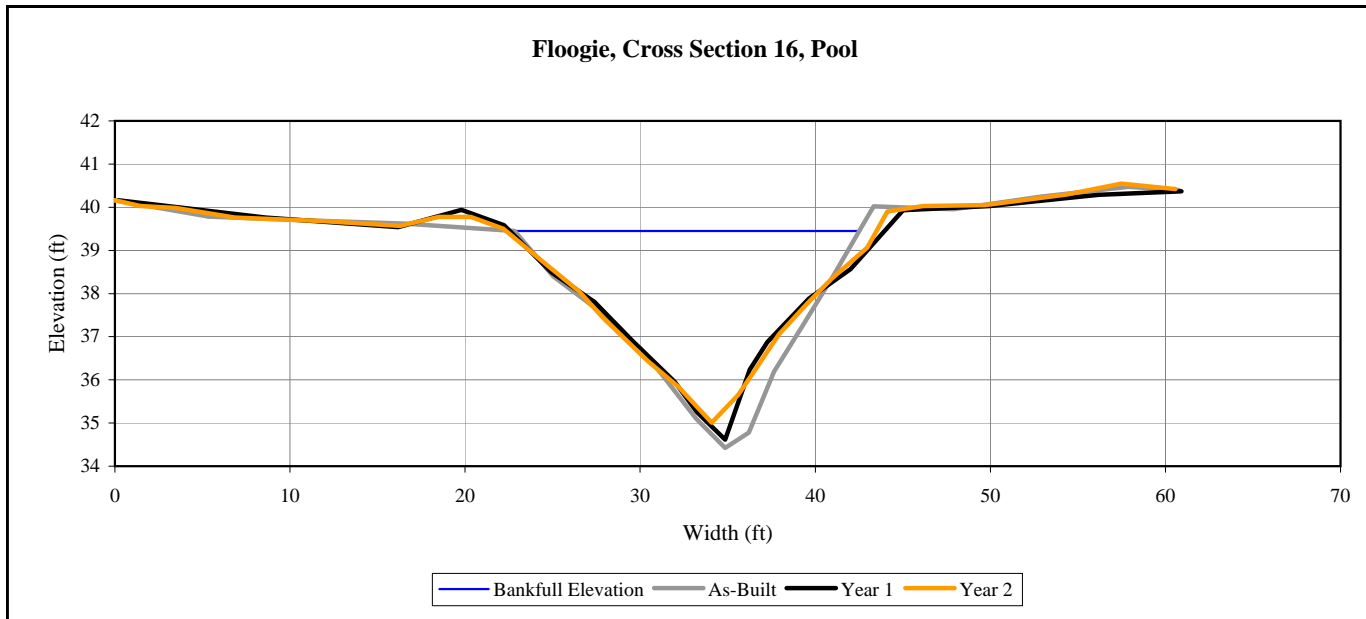




Left bank



Right bank

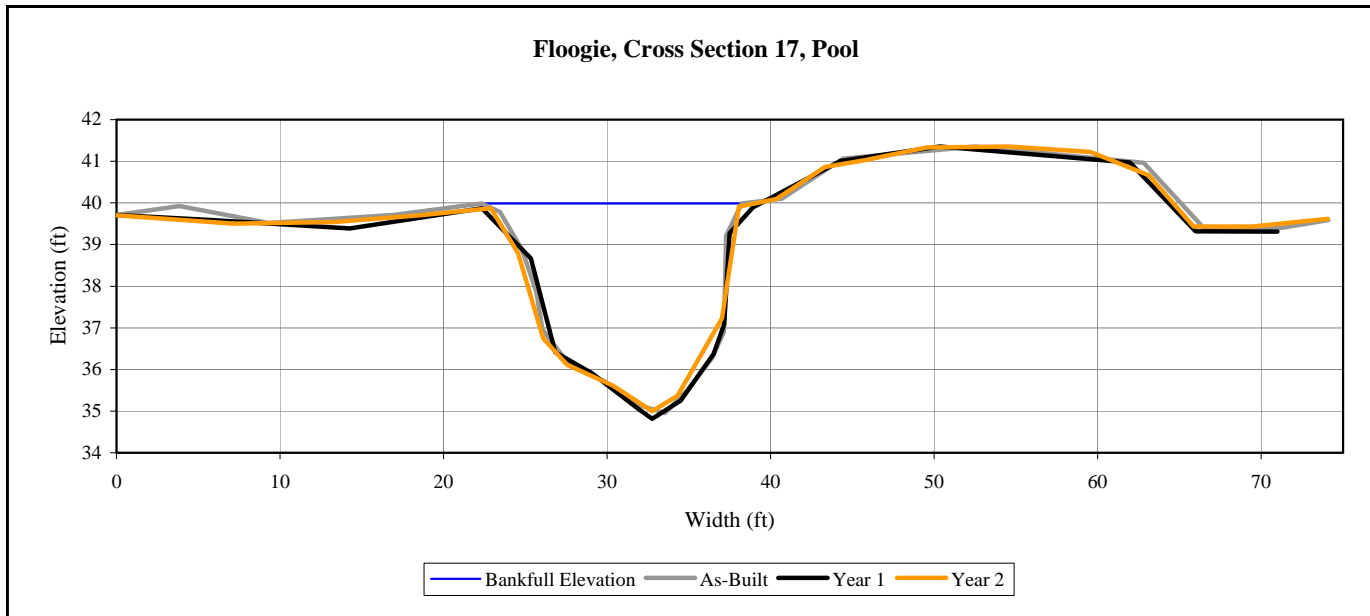




Left bank



Right bank

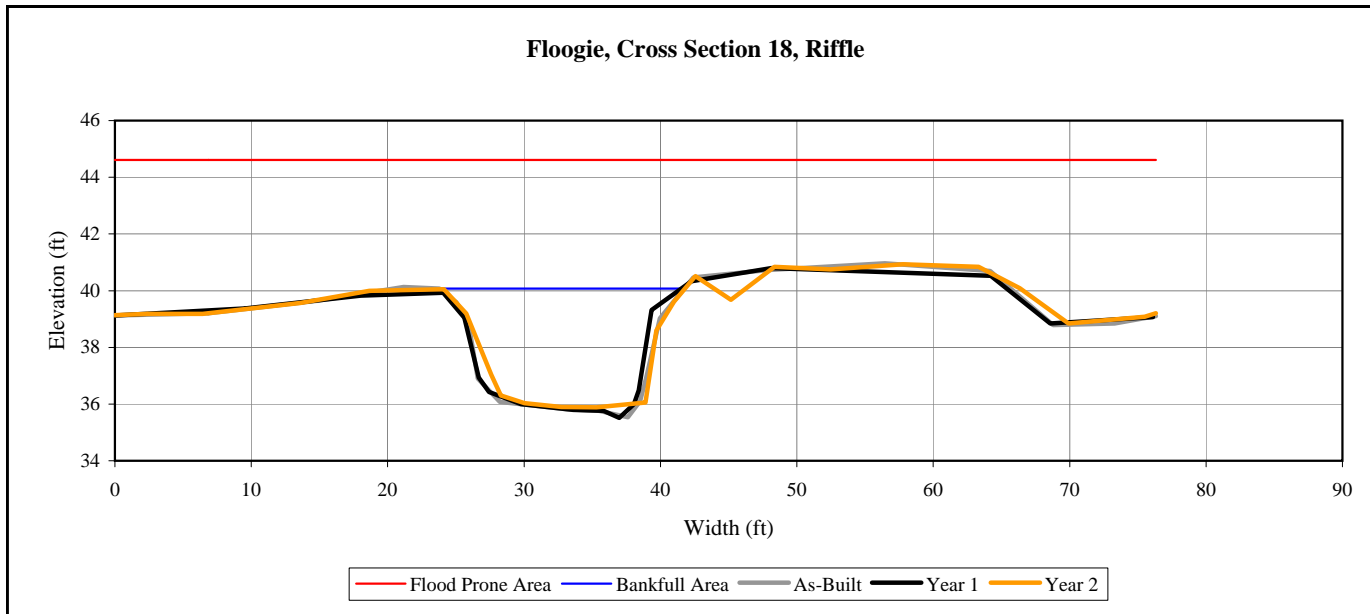




Left bank



Right bank

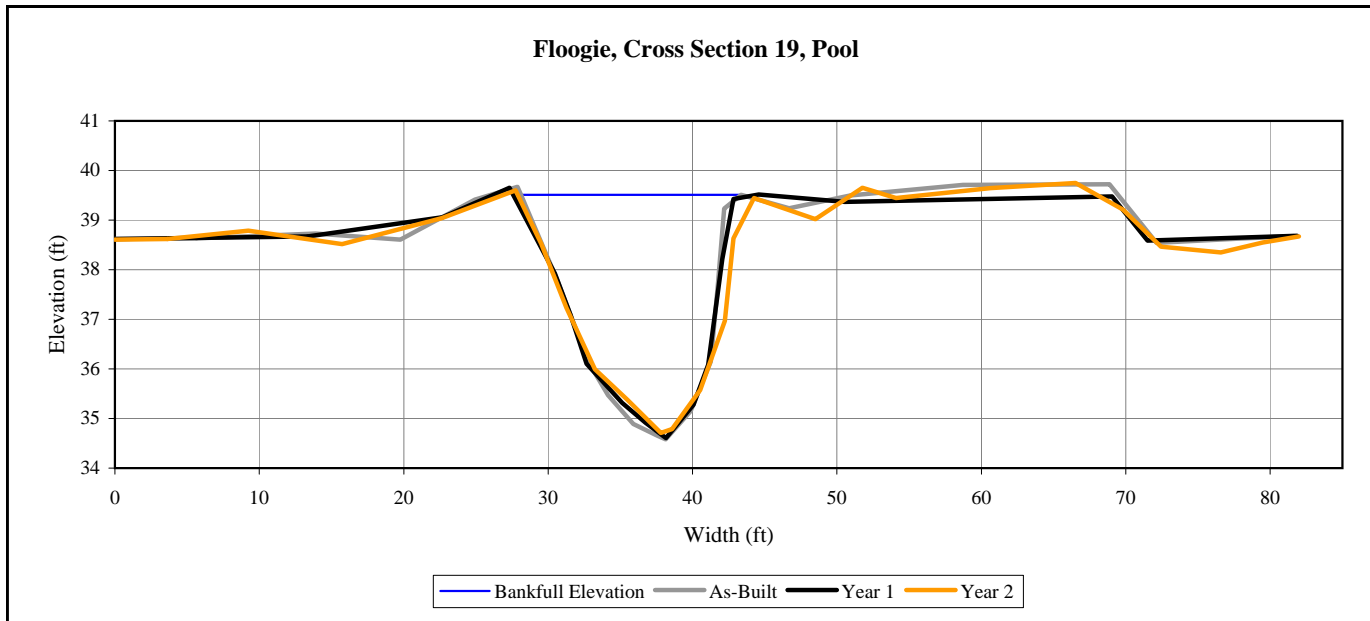




Left bank



Right bank

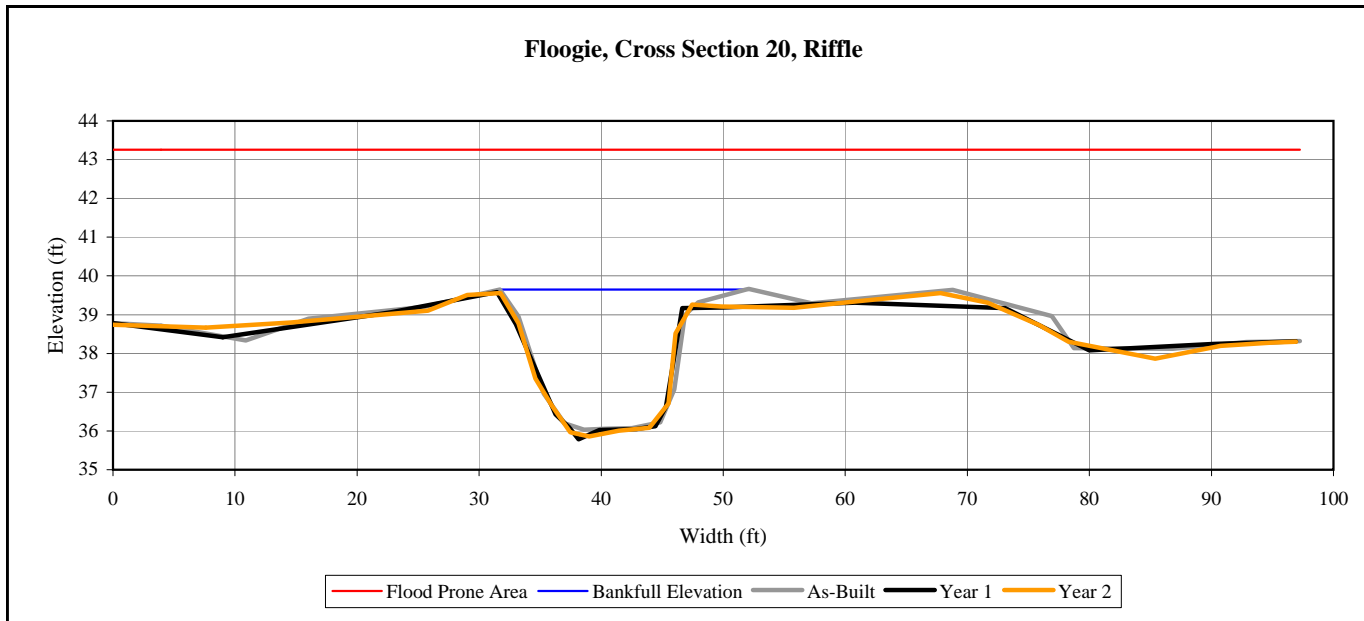




Left bank



Right bank



# **APPENDIX C**

## **2009 Gauge Data**

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
1-Jan-2009	0:00:00															
1-Jan-2009	6:00:00															
1-Jan-2009	12:00:00															
1-Jan-2009	18:00:00															
2-Jan-2009	0:00:00															
2-Jan-2009	6:00:00															
2-Jan-2009	12:00:00															
2-Jan-2009	18:00:00															
3-Jan-2009	0:00:00															
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3-Jan-2009	12:00:00															
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8-Jan-2009	12:00:00															
8-Jan-2009	18:00:00															
9-Jan-2009	0:00:00															
9-Jan-2009	6:00:00															
9-Jan-2009	12:00:00															
9-Jan-2009	18:00:00															
10-Jan-2009	0:00:00															
10-Jan-2009	6:00:00															
10-Jan-2009	12:00:00															
10-Jan-2009	18:00:00															
11-Jan-2009	0:00:00															
11-Jan-2009	6:00:00															
11-Jan-2009	12:00:00															
11-Jan-2009	18:00:00															
12-Jan-2009	0:00:00															
12-Jan-2009	6:00:00															
12-Jan-2009	12:00:00															
12-Jan-2009	18:00:00															
13-Jan-2009	0:00:00															
13-Jan-2009	6:00:00															

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
13-Jan-2009	12:00:00															
13-Jan-2009	18:00:00															
14-Jan-2009	0:00:00															
14-Jan-2009	6:00:00															
14-Jan-2009	12:00:00															
14-Jan-2009	18:00:00															
15-Jan-2009	0:00:00															
15-Jan-2009	6:00:00															
15-Jan-2009	12:00:00															
15-Jan-2009	18:00:00															
16-Jan-2009	0:00:00															
16-Jan-2009	6:00:00															
16-Jan-2009	12:00:00															
16-Jan-2009	18:00:00															
17-Jan-2009	0:00:00															
17-Jan-2009	6:00:00															
17-Jan-2009	12:00:00															
17-Jan-2009	18:00:00															
18-Jan-2009	0:00:00															
18-Jan-2009	6:00:00															
18-Jan-2009	12:00:00															
18-Jan-2009	18:00:00															
19-Jan-2009	0:00:00															
19-Jan-2009	6:00:00															
19-Jan-2009	12:00:00															
19-Jan-2009	18:00:00															
20-Jan-2009	0:00:00															
20-Jan-2009	6:00:00															
20-Jan-2009	12:00:00															
20-Jan-2009	18:00:00															
21-Jan-2009	0:00:00															
21-Jan-2009	6:00:00															
21-Jan-2009	12:00:00															
21-Jan-2009	18:00:00															
22-Jan-2009	0:00:00															
22-Jan-2009	6:00:00															
22-Jan-2009	12:00:00															
22-Jan-2009	18:00:00															
23-Jan-2009	0:00:00															
23-Jan-2009	6:00:00															
23-Jan-2009	12:00:00															
23-Jan-2009	18:00:00															
24-Jan-2009	0:00:00															
24-Jan-2009	6:00:00															
24-Jan-2009	12:00:00															
24-Jan-2009	18:00:00															
25-Jan-2009	0:00:00															
25-Jan-2009	6:00:00															
25-Jan-2009	12:00:00															
25-Jan-2009	18:00:00															



Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
26-Jan-2009	0:00:00															
26-Jan-2009	6:00:00															
26-Jan-2009	12:00:00															
26-Jan-2009	18:00:00															
27-Jan-2009	0:00:00															
27-Jan-2009	6:00:00															
27-Jan-2009	12:00:00															
27-Jan-2009	18:00:00															
28-Jan-2009	0:00:00															
28-Jan-2009	6:00:00															
28-Jan-2009	12:00:00															
28-Jan-2009	18:00:00															
29-Jan-2009	0:00:00															
29-Jan-2009	6:00:00															
29-Jan-2009	12:00:00															
29-Jan-2009	18:00:00															
30-Jan-2009	0:00:00														0.01	
30-Jan-2009	6:00:00															
30-Jan-2009	12:00:00															
30-Jan-2009	18:00:00															
31-Jan-2009	0:00:00															
31-Jan-2009	6:00:00															
31-Jan-2009	12:00:00															
31-Jan-2009	18:00:00															
1-Feb-2009	0:00:00															0.01
1-Feb-2009	6:00:00															
1-Feb-2009	12:00:00															
1-Feb-2009	18:00:00															
2-Feb-2009	0:00:00															
2-Feb-2009	6:00:00															
2-Feb-2009	12:00:00															
2-Feb-2009	18:00:00															
3-Feb-2009	0:00:00															
3-Feb-2009	6:00:00															
3-Feb-2009	12:00:00															
3-Feb-2009	18:00:00															
4-Feb-2009	0:00:00															
4-Feb-2009	6:00:00															
4-Feb-2009	12:00:00															
4-Feb-2009	18:00:00															
5-Feb-2009	0:00:00															
5-Feb-2009	6:00:00															
5-Feb-2009	12:00:00															
5-Feb-2009	18:00:00															
6-Feb-2009	0:00:00															
6-Feb-2009	6:00:00															
6-Feb-2009	12:00:00															
6-Feb-2009	18:00:00															
7-Feb-2009	0:00:00															0.01
7-Feb-2009	6:00:00															

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
7-Feb-2009	12:00:00															
7-Feb-2009	18:00:00															
8-Feb-2009	0:00:00															
8-Feb-2009	6:00:00															
8-Feb-2009	12:00:00															
8-Feb-2009	18:00:00															
9-Feb-2009	0:00:00															
9-Feb-2009	6:00:00															
9-Feb-2009	12:00:00															
9-Feb-2009	18:00:00															
10-Feb-2009	0:00:00															
10-Feb-2009	6:00:00															
10-Feb-2009	12:00:00															
10-Feb-2009	18:00:00															
11-Feb-2009	0:00:00															
11-Feb-2009	6:00:00															
11-Feb-2009	12:00:00															
11-Feb-2009	18:00:00															
12-Feb-2009	0:00:00															
12-Feb-2009	6:00:00															
12-Feb-2009	12:00:00															
12-Feb-2009	18:00:00															
13-Feb-2009	0:00:00															
13-Feb-2009	6:00:00															
13-Feb-2009	12:00:00															
13-Feb-2009	18:00:00															
14-Feb-2009	0:00:00															
14-Feb-2009	6:00:00															
14-Feb-2009	12:00:00															
14-Feb-2009	18:00:00															
15-Feb-2009	0:00:00															
15-Feb-2009	6:00:00															
15-Feb-2009	12:00:00															
15-Feb-2009	18:00:00															
16-Feb-2009	0:00:00															
16-Feb-2009	6:00:00															
16-Feb-2009	12:00:00															
16-Feb-2009	18:00:00															
17-Feb-2009	0:00:00															
17-Feb-2009	6:00:00															
17-Feb-2009	12:00:00															
17-Feb-2009	18:00:00															
18-Feb-2009	0:00:00															
18-Feb-2009	6:00:00															
18-Feb-2009	12:00:00															
18-Feb-2009	18:00:00															
19-Feb-2009	0:00:00														0.01	
19-Feb-2009	6:00:00															
19-Feb-2009	12:00:00															
19-Feb-2009	18:00:00															

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
20-Feb-2009	0:00:00															
20-Feb-2009	6:00:00															
20-Feb-2009	12:00:00															
20-Feb-2009	18:00:00															
21-Feb-2009	0:00:00															
21-Feb-2009	6:00:00															
21-Feb-2009	12:00:00															
21-Feb-2009	18:00:00															
22-Feb-2009	0:00:00															
22-Feb-2009	6:00:00															
22-Feb-2009	12:00:00															
22-Feb-2009	18:00:00															
23-Feb-2009	0:00:00															
23-Feb-2009	6:00:00															
23-Feb-2009	12:00:00															
23-Feb-2009	18:00:00															
24-Feb-2009	0:00:00											0.00	0.30		0.01	
24-Feb-2009	6:00:00															
24-Feb-2009	12:00:00															
24-Feb-2009	18:00:00															
25-Feb-2009	0:00:00															
25-Feb-2009	6:00:00															
25-Feb-2009	12:00:00															
25-Feb-2009	18:00:00															
26-Feb-2009	0:00:00	-2.10	-4.12	-17.63	-5.54	-8.42	-5.34		-12.54	-17.66	-27.95					
26-Feb-2009	6:00:00	-2.29	-4.42	-18.43	-5.72	-8.59	-5.58		-12.61	-17.72	-27.93					
26-Feb-2009	12:00:00	-1.95	-3.66	-17.42	-5.19	-8.28	-4.92		-12.32	-17.51	-27.66					
26-Feb-2009	18:00:00	-2.16	-3.75	-18.54	-5.37	-8.35	-4.91		-12.30	-17.41	-27.77					
27-Feb-2009	0:00:00	-2.53	-3.79	-18.51	-5.66	-8.60	-5.27		-12.50	-17.60	-27.89					
27-Feb-2009	6:00:00	-2.95	-4.24	-18.96	-6.10	-8.94	-5.75		-13.00	-18.08	-28.35					
27-Feb-2009	12:00:00	-2.37	-3.38	-17.88	-5.41	-8.27	-4.63		-12.22	-17.38	-27.71					
27-Feb-2009	18:00:00	-2.37	-3.30	-18.09	-5.33	-8.30	-4.39		-12.10	-17.30	-27.43					
28-Feb-2009	0:00:00	-2.51	-3.19	-17.99	-5.41	-8.44	-4.70		-12.16	-17.33	-27.67				1.11	
28-Feb-2009	6:00:00	-2.39	-2.92	-17.51	-5.37	-8.50	-4.50		-12.26	-17.46	-27.80					
28-Feb-2009	12:00:00	-0.90	-0.18	-10.86	-2.78	-7.31	-2.34		-12.79	-17.96	-28.29			0.01		
28-Feb-2009	18:00:00	0.13	0.39	-8.19	-1.58	-3.60	-0.96		-13.11	-18.28	-28.53					
1-Mar-2009	0:00:00	0.74	0.48	-7.89	0.49	-0.89	1.14		-13.24	-18.38	-28.76				2.03	
1-Mar-2009	6:00:00	0.09	0.11	-8.60	-0.01	1.13	0.80		-13.51	-18.48	-28.89					
1-Mar-2009	12:00:00	0.59	0.48	-7.58	0.56	2.94	1.51		-13.41	-18.40	-28.71					
1-Mar-2009	18:00:00	1.77	2.78	-6.78	3.44	5.87	2.11		-12.57	-7.04	-6.23					
2-Mar-2009	0:00:00	1.14	2.08	-7.75	6.08	8.15	1.33		-5.96	-10.94	-2.48				0.07	1.15
2-Mar-2009	6:00:00	0.47	-0.19	-8.73	0.34	4.86	0.62		-1.60	-18.43	-3.19					
2-Mar-2009	12:00:00	-0.55	-1.05	-9.31	-0.79	3.62	-0.14		-2.56	-19.66	-4.39					
2-Mar-2009	18:00:00	-0.72	-1.27	-9.59	-1.12	2.98	-0.26		-3.07	-19.62	-5.15					
3-Mar-2009	0:00:00	-1.63	-2.04	-10.55	-2.20	2.00	-1.02		-4.44	-20.22	-6.87					
3-Mar-2009	6:00:00	-2.45	-3.13	-11.46	-3.46	0.94	-2.09		-5.84	-20.87	-8.93					
3-Mar-2009	12:00:00	-0.90	-1.41	-9.17	-2.14	2.16	-0.42		-4.95	-19.50	-8.79					
3-Mar-2009	18:00:00	-0.39	-0.99	-9.11	-1.35	2.45	0.23		-5.16	-18.96	-9.42					
4-Mar-2009	0:00:00	-2.73	-3.87	-11.36	-3.99	-0.16	-2.45		-8.31	-21.17	-13.37					
4-Mar-2009	6:00:00	-3.24	-5.55	-12.41	-4.90	-0.89	-3.16		-9.84	-21.54	-15.65					

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
4-Mar-2009	12:00:00	0.60	-0.19	-7.50	-0.89	2.56	0.66		-7.42	-17.80	-13.74					
4-Mar-2009	18:00:00	0.87	0.00	-8.03	-0.25	2.75	1.16		-8.25	-17.38	-14.66					
5-Mar-2009	0:00:00	-1.42	-2.84	-9.97	-2.65	0.18	-1.31		-12.04	-19.73	-18.42					
5-Mar-2009	6:00:00	-1.67	-3.73	-10.37	-3.17	-0.35	-1.84		-13.84	-19.85	-20.06					
5-Mar-2009	12:00:00	0.71	-0.49	-7.41	-0.47	1.86	0.67		-12.34	-17.42	-18.89					
5-Mar-2009	18:00:00	0.74	-0.87	-8.40	-0.49	1.87	0.62		-12.22	-17.40	-19.57					
6-Mar-2009	0:00:00	0.51	-1.16	-8.01	-0.85	1.38	0.13		-12.58	-17.63	-21.19					
6-Mar-2009	6:00:00	0.38	-1.34	-8.03	-0.91	1.09	-0.11		-12.66	-17.71	-22.55					
6-Mar-2009	12:00:00	0.47	-1.24	-7.81	-0.88	1.08	-0.01		-12.44	-17.51	-24.19					
6-Mar-2009	18:00:00	0.47	-1.41	-7.91	-0.87	1.02	-0.02		-12.31	-17.38	-27.07					
7-Mar-2009	0:00:00	0.48	-1.38	-7.80	-0.99	0.78	-0.17		-12.33	-17.40	-27.72					
7-Mar-2009	6:00:00	0.60	-1.26	-7.73	-0.91	0.66	-0.24		-12.28	-17.34	-27.72					
7-Mar-2009	12:00:00	0.35	-1.71	-8.07	-1.17	0.38	-0.72		-12.34	-17.47	-27.83					
7-Mar-2009	18:00:00	0.42	-1.71	-8.03	-1.11	0.17	-0.66		-12.24	-17.18	-27.61					
8-Mar-2009	0:00:00	0.45	-1.52	-7.86	-1.21	0.07	-0.82		-12.28	-17.23	-27.57					
8-Mar-2009	6:00:00	0.50	-1.60	-8.05	-1.34	-0.13	-1.08		-12.34	-17.35	-27.77					
8-Mar-2009	12:00:00	0.32	-1.99	-8.01	-1.48	-0.44	-1.15		-12.30	-17.38	-27.68					
8-Mar-2009	18:00:00	0.24	-2.29	-8.06	-1.60	-0.42	-1.20		-12.13	-17.15	-27.56					
9-Mar-2009	0:00:00	0.36	-1.98	-7.98	-1.63	-0.61	-1.39		-12.15	-17.24	-27.60					
9-Mar-2009	6:00:00	0.33	-2.01	-8.05	-1.75	-0.84	-1.51		-12.24	-17.24	-27.65					
9-Mar-2009	12:00:00	-0.01	-2.97	-8.45	-2.23	-1.16	-1.86		-12.34	-17.39	-27.75					
9-Mar-2009	18:00:00	0.00	-3.44	-8.91	-2.45	-1.39	-2.05		-12.12	-17.14	-27.62					
10-Mar-2009	0:00:00	-0.29	-3.76	-9.42	-3.01	-2.10	-2.81		-12.63	-17.65	-28.03					
10-Mar-2009	6:00:00	-0.58	-4.14	-9.65	-3.53	-2.54	-3.31		-12.94	-17.95	-28.43					
10-Mar-2009	12:00:00	0.14	-3.55	-8.64	-3.04	-2.18	-2.71		-12.32	-17.41	-27.74					
10-Mar-2009	18:00:00	0.27	-3.61	-8.79	-3.01	-2.21	-2.63		-12.20	-17.11	-27.68					
11-Mar-2009	0:00:00	0.02	-3.45	-8.81	-3.16	-2.47	-2.88		-12.37	-17.40	-27.80					
11-Mar-2009	6:00:00	0.25	-3.04	-8.47	-3.10	-2.44	-2.84		-12.38	-17.47	-27.61					
11-Mar-2009	12:00:00	0.11	-3.20	-8.51	-3.32	-2.64	-2.76		-12.21	-17.41	-27.71					
11-Mar-2009	18:00:00	0.13	-3.84	-8.97	-3.33	-3.00	-2.96		-12.15	-17.28	-27.71					
12-Mar-2009	0:00:00	0.19	-3.43	-8.89	-3.28	-3.01	-3.07		-12.10	-17.18	-27.60					
12-Mar-2009	6:00:00	0.15	-4.05	-9.33	-3.52	-3.30	-3.34		-12.13	-17.17	-27.62					
12-Mar-2009	12:00:00	-0.06	-4.96	-10.38	-4.09	-3.72	-3.83		-12.26	-17.39	-27.86					
12-Mar-2009	18:00:00	-0.04	-5.02	-10.81	-4.09	-3.78	-3.79		-12.19	-17.20	-27.63					
13-Mar-2009	0:00:00	-0.21	-4.92	-11.21	-4.36	-4.19	-4.32		-12.48	-17.53	-27.95					
13-Mar-2009	6:00:00	-0.03	-4.71	-11.35	-4.34	-4.21	-4.32		-12.39	-17.50	-27.91					
13-Mar-2009	12:00:00	0.47	0.27	-7.59	-1.11	-1.18	-1.14		-12.62	-17.72	-28.05					
13-Mar-2009	18:00:00	1.20	0.77	-7.29	0.87	1.40	1.87		-12.61	-17.70	-28.04					
14-Mar-2009	0:00:00	1.56	1.07	-7.64	1.43	5.34	1.68		-12.57	-17.64	-10.09					
14-Mar-2009	6:00:00	0.84	0.44	-7.99	0.51	4.58	1.36		-12.69	-17.77	-12.98					
14-Mar-2009	12:00:00	0.79	0.35	-7.99	0.28	4.24	1.30		-12.55	-17.69	-15.99					
14-Mar-2009	18:00:00	0.81	0.41	-7.82	0.08	3.89	1.33		-12.55	-17.72	-16.95					
15-Mar-2009	0:00:00	1.26	0.76	-7.61	0.77	4.22	1.63		-12.54	-17.59	-12.67					
15-Mar-2009	6:00:00	1.05	0.56	-7.75	0.55	4.26	1.34		-12.54	-17.64	-15.17					
15-Mar-2009	12:00:00	1.50	1.00	-7.53	0.93	4.56	1.88		-12.37	-17.52	-14.12					
15-Mar-2009	18:00:00	1.76	1.24	-7.44	1.31	5.00	1.96		-12.30	-17.51	-13.27					
16-Mar-2009	0:00:00	1.46	1.01	-7.55	1.19	4.87	1.61		-3.55	-17.47	-14.53					
16-Mar-2009	6:00:00	1.10	0.59	-7.64	0.63	4.39	1.45		-2.50	-17.62	-16.76					
16-Mar-2009	12:00:00	1.07	0.59	-7.43	0.51	4.08	1.45		-1.98	-17.45	-19.59					
16-Mar-2009	18:00:00	1.04	0.51	-7.56	0.39	3.89	1.42		-1.88	-17.45	-22.91					

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
17-Mar-2009	0:00:00	1.67	1.13	-6.92	1.06	4.30	2.45		-1.26	-17.44	-17.22						
17-Mar-2009	6:00:00	1.85	1.66	-7.20	2.61	5.58	1.90		-0.32	-12.42	-12.15						
17-Mar-2009	12:00:00	1.44	0.94	-7.34	1.21	4.96	1.50		0.02	-13.03	-14.05						
17-Mar-2009	18:00:00	1.19	0.63	-7.58	0.91	4.49	1.44		-0.20	-5.95	-16.07						
18-Mar-2009	0:00:00	0.07	-0.56	-8.24	-0.31	3.08	0.41		-1.48	-6.79	-19.26						
18-Mar-2009	6:00:00	0.18	-0.51	-8.27	-0.32	2.87	0.40		-1.58	-6.67	-20.81						
18-Mar-2009	12:00:00	0.99	0.22	-7.31	0.32	3.47	1.27		-1.04	-6.30	-21.97						
18-Mar-2009	18:00:00	0.87	0.04	-8.15	0.08	3.18	1.09		-1.24	-6.60	-22.49						
19-Mar-2009	0:00:00	0.93	-0.03	-7.50	0.08	2.99	1.13		-1.38	-7.45	-26.03				0.27		
19-Mar-2009	6:00:00	0.51	-0.50	-8.00	-0.37	2.41	0.74		-1.89	-8.74	-28.11						
19-Mar-2009	12:00:00	0.78	-0.45	-7.31	-0.28	2.46	1.00		-1.88	-9.08	-27.86						
19-Mar-2009	18:00:00	0.79	-0.79	-8.48	-0.28	2.22	1.00		-1.99	-9.67	-27.79						
20-Mar-2009	0:00:00	1.22	0.78	-6.98	0.81	2.96	1.69		-1.38	-6.28	-27.62				0.17		
20-Mar-2009	6:00:00	1.77	1.24	-7.23	1.37	4.50	1.80		-0.99	-6.37	-18.13						
20-Mar-2009	12:00:00	1.31	0.58	-7.32	0.93	4.30	1.37		-1.22	-6.24	-22.55						
20-Mar-2009	18:00:00	1.14	0.34	-8.19	0.61	3.89	1.21		-1.05	-6.18	-26.36						
21-Mar-2009	0:00:00	0.71	-0.10	-8.42	-0.09	3.17	0.86		-1.58	-6.86	-28.04						
21-Mar-2009	6:00:00	-0.13	-1.18	-9.13	-1.13	1.98	-0.13		-2.50	-8.33	-28.83						
21-Mar-2009	12:00:00	0.89	-0.38	-8.03	-0.20	2.86	0.97		-1.52	-8.15	-27.73						
21-Mar-2009	18:00:00	0.96	-0.50	-8.16	-0.33	2.62	0.90		-1.54	-8.46	-27.55						
22-Mar-2009	0:00:00	0.26	-1.39	-8.53	-1.16	1.67	0.12		-2.41	-9.72	-28.28						
22-Mar-2009	6:00:00	-0.01	-1.81	-8.66	-1.47	1.13	-0.24		-2.73	-10.60	-28.52						
22-Mar-2009	12:00:00	0.68	-1.26	-7.91	-0.85	1.62	0.36		-2.29	-10.72	-27.77						
22-Mar-2009	18:00:00	0.67	-1.45	-8.55	-0.86	1.46	0.32		-2.24	-11.02	-27.56						
23-Mar-2009	0:00:00	0.77	-1.42	-8.05	-0.92	1.30	0.24		-2.32	-11.84	-27.65						
23-Mar-2009	6:00:00	0.57	-1.66	-8.28	-1.11	0.95	-0.10		-2.66	-13.06	-27.81						
23-Mar-2009	12:00:00	0.67	-1.93	-7.91	-1.12	0.70	-0.07		-2.72	-14.17	-27.71						
23-Mar-2009	18:00:00	0.63	-2.17	-8.69	-1.23	0.56	-0.30		-2.82	-14.69	-27.51						
24-Mar-2009	0:00:00	0.39	-2.66	-8.39	-1.57	-0.01	-0.73		-3.42	-16.39	-27.91						
24-Mar-2009	6:00:00	0.01	-3.08	-8.99	-2.12	-0.62	-1.34		-3.99	-17.76	-28.38						
24-Mar-2009	12:00:00	0.47	-2.89	-8.48	-1.87	-0.25	-1.01		-3.78	-17.52	-27.80						
24-Mar-2009	18:00:00	0.51	-3.31	-8.75	-1.96	-0.40	-1.21		-3.81	-17.23	-27.60						
25-Mar-2009	0:00:00	-0.06	-3.63	-8.64	-2.59	-1.10	-2.02		-4.54	-18.02	-28.22	0.95	0.90				
25-Mar-2009	6:00:00	-0.05	-3.55	-8.71	-2.86	-1.38	-2.24		-5.00	-18.00	-28.27						
25-Mar-2009	12:00:00	0.60	-2.97	1.02	-2.50	-1.22	-1.72		-3.55	-16.64	-27.72						
25-Mar-2009	18:00:00	0.73	-2.60	-0.13	-2.49	-1.25	-1.74		-3.56	-17.41	-27.62						
26-Mar-2009	0:00:00	0.84	-2.25	-0.98	-2.42	-1.31	-1.69		-3.72	-18.01	-27.61				0.07		
26-Mar-2009	6:00:00	0.79	-2.07	-2.45	-2.54	-1.40	-1.86		-3.92	-18.19	-27.71						
26-Mar-2009	12:00:00	0.80	-1.16	-2.53	-2.17	-1.36	-1.43		-3.48	-18.66	-27.80						
26-Mar-2009	18:00:00	0.89	-0.93	-4.65	-1.78	-1.33	-1.22		-3.34	-18.33	-27.65						
27-Mar-2009	0:00:00	1.13	0.30	-3.98	-0.35	-0.24	-0.11		-1.76	-6.94	-27.74				0.87		
27-Mar-2009	6:00:00	1.63	0.99	-4.20	1.05	4.39	1.63		0.03	-2.43	-27.74						
27-Mar-2009	12:00:00	1.17	0.50	-4.53	0.32	3.80	1.34		0.89	-1.44	-25.50						
27-Mar-2009	18:00:00	2.03	2.00	-3.86	1.59	4.90	2.00		1.93	1.32	-11.21						
28-Mar-2009	0:00:00	2.10	3.16	-4.43	5.37	5.82	2.06		2.69	2.16	-3.05				0.59		
28-Mar-2009	6:00:00	1.95	1.86	-5.39	2.81	5.16	1.86		2.31	1.91	-2.51						
28-Mar-2009	12:00:00	1.79	1.05	-5.16	0.93	4.50	1.50		1.79	1.37	-1.37						
28-Mar-2009	18:00:00	1.65	0.75	-6.79	0.67	4.14	1.45		1.54	1.16	-0.72						
29-Mar-2009	0:00:00	2.45	3.27	-6.50	2.01	5.22	2.65		2.24	1.94	-0.03						
29-Mar-2009	6:00:00	2.18	1.61	-8.57	2.60	5.17	1.70		2.29	1.76	-0.11						

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
29-Mar-2009	12:00:00	1.93	1.07	-9.84	0.95	4.51	1.54		1.84	1.37	-0.12					
29-Mar-2009	18:00:00	1.51	0.53	-12.54	0.28	3.98	1.22		1.33	0.89	-0.15					
30-Mar-2009	0:00:00	1.49	0.23	-8.88	0.10	3.68	1.15		1.03	0.64	-0.50					
30-Mar-2009	6:00:00	1.19	-0.10	-6.51	-0.43	3.08	0.96		0.58	0.23	-0.98					
30-Mar-2009	12:00:00	1.16	-0.42	-5.05	-0.67	2.94	0.91		0.48	0.12	-1.03					
30-Mar-2009	18:00:00	0.98	-1.09	-5.01	-0.98	2.47	0.73		0.22	-0.25	-1.21					
31-Mar-2009	0:00:00	0.63	-1.58	-3.27	-1.52	1.78	0.14		-0.41	-0.90	-1.86					
31-Mar-2009	6:00:00	0.17	-2.16	-2.28	-2.02	1.03	-0.46		-1.03	-1.57	-2.49					
31-Mar-2009	12:00:00	0.97	-1.80	-1.74	-1.35	1.63	0.35		-0.35	-0.97	-1.86					
31-Mar-2009	18:00:00	1.03	-1.90	-2.94	-1.39	1.51	0.36		-0.33	-0.85	-1.73			1.15		
1-Apr-2009	0:00:00	0.97	-1.95	-2.63	-1.67	1.08	0.02		-0.63	-1.11	-1.98				0.02	
1-Apr-2009	6:00:00	0.87	-1.90	-3.42	-1.87	0.79	-0.06		-0.80	-1.30	-2.29					
1-Apr-2009	12:00:00	0.87	-1.22	-3.63	-1.61	0.64	-0.11		-0.72	-1.26	-2.49					
1-Apr-2009	18:00:00	0.95	-1.63	-4.83	-1.52	0.43	-0.11		-0.72	-1.35	-2.51					
2-Apr-2009	0:00:00	1.02	-1.47	-4.21	-1.19	0.28	-0.02		-0.72	-1.39	-2.79					4.07
2-Apr-2009	6:00:00	0.93	-1.57	-4.69	-1.28	0.08	-0.24		-0.97	-1.62	-2.89					
2-Apr-2009	12:00:00	0.87	-1.57	-5.10	-1.41	-0.23	-0.29		-1.02	-1.66	-2.99					
2-Apr-2009	18:00:00	0.89	-1.35	-6.83	-1.21	-0.25	-0.16		-0.97	-1.64	-2.90					
3-Apr-2009	0:00:00	0.89	-1.18	-8.82	-1.16	-0.37	-0.22		-1.06	-1.66	-2.89				0.03	
3-Apr-2009	6:00:00	0.96	-0.97	-11.57	-0.94	-0.29	-0.08		-0.96	-1.58	-2.76					
3-Apr-2009	12:00:00	0.80	-1.42	-12.85	-1.17	-0.62	-0.18		-1.26	-1.86	-3.07					
3-Apr-2009	18:00:00	0.67	-2.90	-12.71	-1.23	-0.70	-0.37		-1.21	-1.86	-3.43					
4-Apr-2009	0:00:00	0.69	-3.13	-9.09	-1.63	-1.02	-0.74		-1.44	-2.20	-4.31					
4-Apr-2009	6:00:00	0.63	-3.25	-7.09	-2.13	-1.22	-1.18		-1.65	-2.43	-4.80					
4-Apr-2009	12:00:00	0.61	-4.18	-6.91	-2.78	-1.52	-1.42		-1.70	-2.64	-5.01					
4-Apr-2009	18:00:00	0.21	-5.36	-8.15	-3.44	-1.92	-1.98		-1.86	-2.74	-5.37					
5-Apr-2009	0:00:00	0.37	-4.66	-6.38	-3.51	-2.02	-2.33		-1.90	-2.95	-6.18					
5-Apr-2009	6:00:00	-0.07	-5.29	-5.53	-4.31	-2.70	-3.40		-2.68	-3.73	-7.25					
5-Apr-2009	12:00:00	0.21	-5.76	-5.89	-4.33	-2.48	-3.14		-2.28	-3.31	-6.97					
5-Apr-2009	18:00:00	0.30	-6.16	-8.34	-4.47	-2.51	-3.14		-1.98	-3.09	-6.63					
6-Apr-2009	0:00:00	0.41	-5.26	-8.73	-4.34	-2.63	-3.30		-2.17	-3.25	-6.97				0.22	
6-Apr-2009	6:00:00	0.54	-4.35	-10.63	-4.16	-2.53	-3.25		-2.20	-3.18	-6.80					
6-Apr-2009	12:00:00	1.04	-0.82	-13.11	-1.57	-1.10	-1.10		-1.16	-0.90	-3.03					
6-Apr-2009	18:00:00	0.75	-1.16	-13.51	-2.67	-1.26	-1.52		-1.29	-1.69	-3.41					
7-Apr-2009	0:00:00	0.65	-1.82	-11.67	-2.91	-1.79	-1.78		-1.56	-2.16	-4.49					
7-Apr-2009	6:00:00	0.57	-2.34	-10.65	-3.32	-1.98	-1.92		-1.82	-2.49	-5.22					
7-Apr-2009	12:00:00	0.62	-3.24	-10.13	-3.83	-2.23	-2.21		-1.88	-2.55	-5.55					
7-Apr-2009	18:00:00	0.43	-4.27	-9.73	-4.39	-2.60	-2.80		-2.18	-2.86	-6.15					
8-Apr-2009	0:00:00	-0.52	-5.17	-7.77	-5.41	-3.67	-4.06		-3.07	-4.14	-7.94					
8-Apr-2009	6:00:00	-0.58	-5.25	-6.65	-5.56	-3.84	-4.50		-3.39	-4.46	-8.59					
8-Apr-2009	12:00:00	0.15	-5.22	-6.78	-5.17	-3.19	-3.84		-2.65	-3.79	-7.71					
8-Apr-2009	18:00:00	0.25	-5.94	-8.59	-5.42	-3.24	-4.09		-2.56	-3.56	-7.73					
9-Apr-2009	0:00:00	-0.01	-5.70	-7.04	-5.68	-3.74	-4.67		-2.92	-4.17	-8.79					
9-Apr-2009	6:00:00	0.31	-4.93	-7.14	-5.39	-3.56	-4.70		-2.88	-4.09	-8.87					
9-Apr-2009	12:00:00	0.09	-6.32	-6.39	-6.01	-3.72	-5.02		-3.02	-4.40	-9.17					
9-Apr-2009	18:00:00	-0.09	-6.93	-7.50	-6.38	-4.03	-5.44		-3.12	-4.41	-9.48					
10-Apr-2009	0:00:00	0.07	-6.43	-5.36	-6.27	-4.26	-5.70		-3.21	-4.74	-10.19				0.02	
10-Apr-2009	6:00:00	0.08	-5.79	-5.49	-6.09	-4.14	-5.74		-3.33	-4.81	-10.27					
10-Apr-2009	12:00:00	-0.07	-6.90	-5.58	-6.80	-4.62	-6.17		-3.60	-5.13	-10.32					
10-Apr-2009	18:00:00	-0.13	-7.76	-8.03	-7.06	-4.87	-6.44		-3.58	-5.02	-10.49					

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
11-Apr-2009	0:00:00	0.02	-6.48	-7.93	-6.31	-4.75	-5.98		-3.56	-5.10	-10.64					0.21
11-Apr-2009	6:00:00	0.50	-1.23	-7.82	-3.87	-2.81	-3.18		-2.34	-2.74	-5.67					
11-Apr-2009	12:00:00	0.38	-2.41	-8.27	-4.64	-3.38	-3.48		-2.56	-3.08	-6.19					
11-Apr-2009	18:00:00	0.43	-3.38	-6.08	-4.99	-4.09	-4.13		-2.80	-3.58	-7.67					
12-Apr-2009	0:00:00	0.38	-3.69	-4.25	-5.17	-4.51	-4.58		-2.97	-4.17	-8.91					
12-Apr-2009	6:00:00	0.29	-3.98	-2.97	-5.39	-4.73	-5.02		-3.16	-4.74	-10.05					
12-Apr-2009	12:00:00	0.13	-5.11	-2.48	-6.02	-4.99	-5.32		-3.31	-5.04	-10.32					
12-Apr-2009	18:00:00	-0.21	-6.60	-4.88	-6.63	-5.47	-5.96		-3.58	-5.29	-10.71					
13-Apr-2009	0:00:00	-0.24	-6.02	-4.21	-6.44	-5.64	-6.44		-3.76	-5.73	-11.61					
13-Apr-2009	6:00:00	-0.33	-5.98	-4.19	-6.50	-5.72	-6.66		-4.03	-6.13	-12.08					
13-Apr-2009	12:00:00	-0.11	-6.68	-4.37	-6.81	-5.80	-6.73		-3.93	-5.94	-11.61					
13-Apr-2009	18:00:00	0.00	-6.49	-5.21	-6.68	-5.86	-6.79		-3.99	-6.07	-11.67					
14-Apr-2009	0:00:00	-0.10	-5.76	-5.91	-6.44	-5.81	-6.66		-4.02	-6.02	-11.59				0.95	
14-Apr-2009	6:00:00	0.18	-3.55	-7.28	-5.43	-5.41	-4.81		-3.49	-4.89	-9.99					
14-Apr-2009	12:00:00	0.26	-3.80	-8.57	-5.83	-5.66	-5.18		-3.51	-4.87	-9.44					
14-Apr-2009	18:00:00	0.25	-4.14	-9.37	-6.02	-5.92	-5.35		-3.57	-5.30	-9.99					
15-Apr-2009	0:00:00	1.09	1.04	-7.76	0.11	1.31	1.92		0.09	0.62	-0.08				0.06	
15-Apr-2009	6:00:00	0.87	0.54	-7.31	0.21	4.10	1.18		1.04	0.84	-0.23					
15-Apr-2009	12:00:00	0.65	0.41	-6.24	-0.38	3.58	1.10		1.17	0.74	0.15					
15-Apr-2009	18:00:00	0.55	0.23	-5.25	-0.91	3.01	0.92		0.77	0.42	0.43					
16-Apr-2009	0:00:00	0.62	0.06	-3.31	-1.18	2.63	0.82		0.46	0.09	0.46				0.01	
16-Apr-2009	6:00:00	0.63	-0.14	-2.43	-1.34	2.22	0.82		0.28	-0.08	0.41					
16-Apr-2009	12:00:00	0.39	-0.57	-1.91	-1.75	1.72	0.64		0.09	-0.36	0.31					
16-Apr-2009	18:00:00	0.25	-1.46	-1.73	-2.49	1.27	0.22		-0.25	-0.74	0.18					
17-Apr-2009	0:00:00	-0.19	-2.14	-0.53	-3.34	0.30	-0.67		-0.85	-1.30	-0.41					
17-Apr-2009	6:00:00	-0.40	-2.54	0.15	-3.85	-0.26	-1.30		-1.22	-1.75	-0.61					
17-Apr-2009	12:00:00	0.07	-2.62	-0.47	-3.94	-0.04	-0.79		-0.76	-1.32	-0.11					
17-Apr-2009	18:00:00	-0.04	-3.49	-2.76	-4.41	-0.41	-1.08		-0.72	-1.39	-0.03					
18-Apr-2009	0:00:00	0.09	-3.10	-2.09	-4.45	-0.67	-1.30		-0.80	-1.40	-0.03					
18-Apr-2009	6:00:00	0.33	-3.02	-2.49	-4.45	-0.76	-1.48		-0.81	-1.39	0.06					
18-Apr-2009	12:00:00	0.01	-4.63	-3.42	-5.37	-1.34	-2.20		-1.11	-1.83	-0.20					
18-Apr-2009	18:00:00	-0.16	-5.61	-6.13	-5.77	-1.70	-2.65		-1.06	-1.87	-0.13					
19-Apr-2009	0:00:00	-0.11	-5.01	-5.10	-5.68	-2.05	-2.92		-1.29	-1.98	-0.30				0.06	
19-Apr-2009	6:00:00	-0.03	-4.68	-4.95	-5.77	-2.29	-3.19		-1.47	-2.10	-0.36					
19-Apr-2009	12:00:00	-0.24	-6.48	-5.93	-6.44	-2.62	-3.56		-1.51	-2.31	-0.59					
19-Apr-2009	18:00:00	-0.09	-6.18	-7.16	-6.49	-2.88	-3.71		-1.54	-2.30	-0.44					
20-Apr-2009	0:00:00	0.12	-3.37	-5.83	-5.59	-2.84	-3.02		-1.56	-2.17	-0.49				0.32	
20-Apr-2009	6:00:00	0.05	-3.46	-6.66	-5.69	-2.93	-3.22		-1.62	-2.36	-0.49					
20-Apr-2009	12:00:00	0.17	-3.68	-8.84	-5.91	-3.02	-3.23		-1.75	-2.38	-0.55					
20-Apr-2009	18:00:00	0.60	-0.12	-8.61	-2.05	-1.18	-1.22		-1.12	-1.26	0.03					
21-Apr-2009	0:00:00	0.65	-0.12	-7.58	-2.81	-1.39	-1.10		-1.21	-1.70	-0.09	0.35	0.45	3.30	0.02	
21-Apr-2009	6:00:00	0.43	-0.42	-7.62	-3.08	-1.85	-0.97		-1.36	-2.00	-0.25					
21-Apr-2009	12:00:00	0.29	-1.06	-8.90	-2.77	-1.88	-0.92		-1.45	-2.37	-0.50					
21-Apr-2009	18:00:00	0.03	-2.44	-9.24	-3.71	-2.68	-1.33		-1.65	-2.80	-0.84					
22-Apr-2009	0:00:00	0.06	-2.04	-8.89	-3.87	-2.83	-1.57		-1.77	-2.86	-0.98				0.03	
22-Apr-2009	6:00:00	0.09	-2.25	-9.09	-4.06	-2.84	-1.74		-1.89	-3.02	-1.03					
22-Apr-2009	12:00:00	0.09	-2.61	-9.39	-4.48	-2.89	-1.79		-1.90	-2.88	-1.13					
22-Apr-2009	18:00:00	-0.19	-4.83	-10.45	-5.45	-3.47	-2.56		-2.19	-3.37	-1.62					
23-Apr-2009	0:00:00	-0.22	-4.59	-10.34	-5.39	-3.56	-2.99		-2.29	-3.56	-1.74					
23-Apr-2009	6:00:00	-0.33	-4.69	-10.74	-5.66	-3.73	-3.36		-2.49	-3.80	-2.07					

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
23-Apr-2009	12:00:00	-0.65	-6.64	-12.56	-6.69	-4.27	-4.00		-2.76	-4.21	-2.58					
23-Apr-2009	18:00:00	-1.00	-8.24	-16.02	-7.41	-4.70	-4.75		-2.77	-4.56	-2.81					
24-Apr-2009	0:00:00	-1.03	-7.46	-16.13	-7.10	-4.91	-5.09		-3.07	-4.84	-3.06					
24-Apr-2009	6:00:00	-1.11	-7.26	-16.19	-7.12	-4.88	-5.30		-3.25	-4.94	-3.26					
24-Apr-2009	12:00:00	-1.57	-9.08	-17.90	-8.06	-5.45	-6.06		-3.55	-5.55	-3.90					
24-Apr-2009	18:00:00	-2.20	-10.54	-21.77	-8.80	-6.18	-6.89		-3.87	-6.34	-4.53					
25-Apr-2009	0:00:00	-2.08	-9.36	-21.49	-8.08	-6.17	-6.91		-3.94	-6.39	-4.71					
25-Apr-2009	6:00:00	-2.04	-8.77	-21.41	-7.79	-6.19	-6.98		-4.14	-6.58	-4.87					
25-Apr-2009	12:00:00	-3.03	-10.96	-23.41	-9.28	-6.85	-8.21		-4.62	-7.39	-6.23					
25-Apr-2009	18:00:00	-4.18	-12.76	-25.28	-10.25	-7.79	-9.28		-5.11	-8.65	-7.81					
26-Apr-2009	0:00:00	-4.32	-11.90	-25.17	-9.44	-7.90	-9.29		-5.36	-8.91	-8.06					
26-Apr-2009	6:00:00	-4.53	-11.53	-26.30	-9.39	-7.91	-9.68		-5.64	-9.25	-8.34					
26-Apr-2009	12:00:00	-5.85	-13.60	-27.77	-11.17	-8.82	-11.05		-6.31	-10.41	-10.85					
26-Apr-2009	18:00:00	-7.78	-15.50	-29.75	-12.40	-9.89	-12.80		-6.97	-12.60	-13.37					
27-Apr-2009	0:00:00	-8.28	-14.90	-30.80	-11.49	-9.85	-13.13		-7.33	-13.18	-13.47					
27-Apr-2009	6:00:00	-9.05	-14.92	-31.83	-11.85	-10.16	-14.16		-8.05	-13.69	-14.10					
27-Apr-2009	12:00:00	-9.85	-15.98	-32.13	-13.10	-10.62	-15.04		-8.60	-14.25	-16.03					
27-Apr-2009	18:00:00	-12.61	-17.59	-32.78	-14.61	-11.86	-17.24		-9.92	-16.58	-18.62					
28-Apr-2009	0:00:00	-13.56	-17.54	-33.03	-14.21	-12.06	-17.84		-10.74	-17.55	-18.98					
28-Apr-2009	6:00:00	-15.21	-18.73	-34.38	-15.51	-13.30	-19.27		-12.45	-18.96	-20.00					
28-Apr-2009	12:00:00	-14.95	-18.42	-32.83	-15.51	-12.68	-18.95		-12.00	-18.02	-20.31					
28-Apr-2009	18:00:00	-16.67	-19.36	-32.67	-16.67	-13.56	-20.62		-13.41	-19.63	-22.62					
29-Apr-2009	0:00:00	-16.91	-19.08	-32.71	-16.40	-13.30	-20.53		-13.82	-20.43	-23.03					
29-Apr-2009	6:00:00	-17.92	-19.69	-33.32	-17.38	-13.98	-21.47		-14.92	-21.27	-23.52					
29-Apr-2009	12:00:00	-17.91	-19.95	-32.77	-17.65	-14.18	-21.85		-15.31	-21.15	-24.27					
29-Apr-2009	18:00:00	-18.96	-20.72	-32.69	-18.77	-15.02	-23.42		-16.83	-22.45	-27.39					
30-Apr-2009	0:00:00	-19.89	-21.18	-33.24	-19.61	-15.38	-24.05		-17.84	-23.84	-28.31					
30-Apr-2009	6:00:00	-19.99	-20.92	-33.23	-19.70	-15.30	-23.88		-17.96	-24.19	-28.26					
30-Apr-2009	12:00:00	-19.74	-20.98	-32.81	-19.64	-15.29	-23.83		-17.84	-23.89	-27.78					
30-Apr-2009	18:00:00	-20.41	-21.63	-32.67	-20.36	-15.89	-24.95		-18.90	-24.61	-27.73					
1-May-2009	0:00:00	-20.47	-21.22	-32.58	-20.54	-15.56	-24.58		-19.06	-24.91	-27.69					
1-May-2009	6:00:00	-20.45	-20.88	-32.72	-20.45	-15.34	-24.13		-19.17	-25.09	-27.75					
1-May-2009	12:00:00	-20.79	-21.51	-32.67	-20.92	-16.34	-24.95		-19.71	-25.53	-27.86					
1-May-2009	18:00:00	-21.45	-22.12	-32.72	-21.76	-17.28	-26.22		-21.36	-26.50	-27.69					
2-May-2009	0:00:00	-21.60	-21.85	-32.69	-21.93	-16.91	-26.22		-21.66	-27.01	-27.57					1.95
2-May-2009	6:00:00	-21.58	-21.62	-32.67	-22.01	-16.76	-25.96		-21.80	-27.40	-27.67					
2-May-2009	12:00:00	-21.99	-22.28	-32.72	-22.57	-17.87	-26.78		-22.51	-27.80	-27.65					
2-May-2009	18:00:00	-22.65	-22.90	-32.72	-23.30	-19.06	-28.26		-24.18	-28.74	-27.74					
3-May-2009	0:00:00	-22.87	-22.68	-32.69	-23.61	-18.70	-28.57		-24.82	-29.23	-27.65					
3-May-2009	6:00:00	-22.96	-22.60	-32.77	-23.78	-18.54	-28.36		-25.16	-29.64	-27.60					
3-May-2009	12:00:00	-23.38	-23.18	-32.78	-24.26	-19.69	-28.96		-25.87	-30.21	-27.87					
3-May-2009	18:00:00	-23.91	-23.65	-32.77	-24.86	-21.18	-30.41		-27.74	-31.41	-27.79					
4-May-2009	0:00:00	-24.11	-23.55	-32.69	-25.21	-20.83	-30.92		-29.07	-32.61	-27.60				0.05	
4-May-2009	6:00:00	-24.29	-23.44	-32.71	-25.51	-20.64	-30.86		-29.68	-33.80	-27.62					
4-May-2009	12:00:00	-24.83	-24.16	-32.89	-26.15	-21.98	-31.61		-30.81	-34.74	-27.89					
4-May-2009	18:00:00	-25.11	-24.37	-32.72	-26.38	-23.12	-32.63		-32.73	-35.64	-27.69					
5-May-2009	0:00:00	-25.30	-24.18	-32.71	-26.66	-22.85	-33.07		-34.59	-35.41	-27.53				0.47	
5-May-2009	6:00:00	-24.83	-23.78	-32.65	-26.77	-22.25	-31.73		-35.91	-35.48	-27.63					
5-May-2009	12:00:00	-24.63	-23.41	-32.82	-26.62	-21.97	-31.14		-36.78	-35.47	-27.67					
5-May-2009	18:00:00	-23.23	-22.38	-32.82	-25.51	-20.63	-27.52		-37.42	-35.55	-27.71					



Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
6-May-2009	0:00:00	-22.07	-18.33	-32.85	-24.39	-19.73	-25.52		-37.50	-35.49	-27.74				0.31	
6-May-2009	6:00:00	-18.72	-17.01	-32.83	-20.73	-17.87	-21.77		-37.45	-35.47	-27.65					
6-May-2009	12:00:00	-18.09	-17.41	-32.81	-20.26	-18.16	-21.62		-37.51	-35.49	-27.79					
6-May-2009	18:00:00	-9.66	-10.09	-10.70	-14.75	-16.02	-15.19		-37.35	-35.42	-27.63					
7-May-2009	0:00:00	-2.08	-10.80	-12.05	-14.50	-15.96	-15.26		-37.42	-35.48	-27.79				0.30	
7-May-2009	6:00:00	-1.53	-10.39	-13.40	-14.43	-15.79	-15.50		-36.99	-35.42	-27.66					
7-May-2009	12:00:00	-0.52	-4.77	-9.12	-9.33	-13.54	-7.81		-36.50	-35.49	-27.71					
7-May-2009	18:00:00	-0.78	-7.36	-10.57	-11.32	-14.77	-10.69		-36.50	-35.42	-27.71					
8-May-2009	0:00:00	-0.78	-7.06	-11.23	-11.60	-14.84	-11.40		-36.51	-35.38	-27.63				0.05	
8-May-2009	6:00:00	-0.12	-5.10	-10.85	-11.69	-15.00	-11.92		-36.00	-35.44	-27.66					
8-May-2009	12:00:00	-0.78	-7.10	-13.23	-13.16	-16.45	-14.12		-35.74	-35.61	-27.87					
8-May-2009	18:00:00	-0.82	-7.99	-15.59	-13.46	-17.62	-16.28		-36.99	-35.32	-27.63					
9-May-2009	0:00:00	-0.81	-7.38	-16.37	-13.03	-17.62	-16.72		-37.38	-35.46	-27.56					
9-May-2009	6:00:00	-0.64	-7.09	-16.93	-12.81	-17.56	-16.82		-37.36	-35.44	-27.55					
9-May-2009	12:00:00	-1.21	-9.27	-20.34	-14.80	-19.52	-19.01		-37.51	-35.50	-27.78					
9-May-2009	18:00:00	-1.57	-10.74	-23.71	-16.17	-21.62	-21.98		-37.29	-35.36	-27.56					
10-May-2009	0:00:00	-1.80	-10.84	-26.36	-16.81	-21.40	-23.39		-37.41	-35.35	-27.65					
10-May-2009	6:00:00	-1.98	-11.02	-27.53	-17.32	-21.40	-24.11		-37.35	-35.29	-27.49					
10-May-2009	12:00:00	-2.88	-12.54	-28.79	-18.49	-22.81	-25.70		-37.46	-35.43	-27.72					
10-May-2009	18:00:00	-4.23	-13.94	-30.26	-19.78	-24.49	-27.89		-37.45	-35.40	-27.66					
11-May-2009	0:00:00	-5.37	-14.74	-32.06	-20.85	-24.96	-29.21		-37.81	-35.86	-28.10				0.01	
11-May-2009	6:00:00	-5.62	-14.49	-32.49	-20.90	-24.40	-29.04		-37.64	-35.58	-27.78					
11-May-2009	12:00:00	-6.46	-14.88	-33.11	-21.39	-24.98	-29.53		-37.52	-35.60	-27.73					
11-May-2009	18:00:00	-7.20	-14.91	-33.27	-22.19	-25.40	-30.16		-37.89	-35.98	-28.14					
12-May-2009	0:00:00	-9.54	-16.69	-35.04	-24.25	-27.01	-32.24		-39.64	-37.72	-29.76					
12-May-2009	6:00:00	-10.68	-17.47	-35.41	-24.99	-27.48	-33.02		-40.04	-38.10	-30.37					
12-May-2009	12:00:00	-9.11	-15.68	-32.82	-22.82	-25.45	-30.85		-37.42	-35.46	-27.75					
12-May-2009	18:00:00	-11.37	-16.80	-32.73	-23.62	-26.88	-32.15		-37.35	-35.44	-27.63					
13-May-2009	0:00:00	-13.08	-17.76	-33.42	-24.86	-27.88	-33.98		-38.05	-36.14	-28.28					
13-May-2009	6:00:00	-14.98	-19.02	-34.51	-26.33	-28.91	-35.33		-39.22	-37.18	-29.46					
13-May-2009	12:00:00	-14.39	-18.06	-32.84	-25.13	-27.71	-34.01		-37.46	-35.55	-27.63					
13-May-2009	18:00:00	-16.00	-19.05	-32.85	-25.78	-29.33	-34.85		-37.39	-35.52	-27.78					
14-May-2009	0:00:00	-16.84	-19.36	-33.15	-26.54	-29.68	-35.78		-37.90	-35.91	-27.96					
14-May-2009	6:00:00	-16.98	-19.22	-33.09	-26.67	-29.06	-35.62		-37.65	-35.80	-27.84					
14-May-2009	12:00:00	-17.29	-19.65	-32.79	-26.77	-29.46	-35.71		-37.42	-35.49	-27.68					
14-May-2009	18:00:00	-18.15	-20.34	-32.88	-27.27	-30.54	-36.14		-37.39	-35.59	-27.78					
15-May-2009	0:00:00	-18.33	-20.16	-32.82	-27.47	-30.61	-36.52		-37.34	-35.38	-27.73					
15-May-2009	6:00:00	-18.52	-19.95	-32.83	-27.67	-30.16	-36.74		-37.33	-35.46	-27.68					
15-May-2009	12:00:00	-19.05	-20.79	-32.96	-28.10	-30.80	-37.03		-37.40	-35.67	-27.79					
15-May-2009	18:00:00	-19.84	-21.50	-32.78	-28.34	-31.97	-37.43		-37.26	-35.49	-27.71					
16-May-2009	0:00:00	-20.16	-21.30	-32.88	-28.55	-32.30	-37.49		-37.20	-35.43	-27.72				0.05	
16-May-2009	6:00:00	-20.23	-21.19	-32.87	-28.78	-31.90	-37.39		-37.26	-35.50	-27.71					
16-May-2009	12:00:00	-20.46	-21.68	-32.87	-29.00	-32.00	-37.43		-37.29	-35.50	-27.71					
16-May-2009	18:00:00	-21.09	-22.12	-32.81	-29.21	-32.98	-37.37		-37.35	-35.53	-27.65					
17-May-2009	0:00:00	-20.97	-21.68	-32.73	-29.30	-33.06	-37.27		-37.30	-35.52	-27.60				0.72	
17-May-2009	6:00:00	-21.00	-21.40	-32.87	-29.53	-32.74	-37.32		-37.35	-35.55	-27.78					
17-May-2009	12:00:00	-20.79	-21.19	-32.84	-29.51	-32.62	-37.21		-37.33	-35.62	-27.79					
17-May-2009	18:00:00	-8.76	-10.00	-32.78	-26.27	-31.64	-33.01		-37.29	-35.53	-27.71					
18-May-2009	0:00:00	-5.13	-8.70	-33.08	-22.43	-29.48	-25.81		-37.57	-35.70	-27.90				0.25	
18-May-2009	6:00:00	-1.53	-6.37	-19.02	-18.41	-26.45	-20.17		-37.86	-36.09	-28.31					

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
18-May-2009	12:00:00	-0.59	-5.40	-13.17	-15.13	-23.64	-16.26		-37.41	-35.56	-27.77						
18-May-2009	18:00:00	-0.95	-7.38	-16.59	-16.19	-23.56	-17.64		-37.41	-35.55	-27.77						
19-May-2009	0:00:00	-1.72	-7.92	-19.47	-17.43	-23.66	-19.54		-37.90	-36.16	-28.29						
19-May-2009	6:00:00	-2.33	-8.37	-21.69	-18.38	-23.64	-20.75		-38.36	-36.55	-28.75						
19-May-2009	12:00:00	-1.63	-8.56	-23.60	-18.28	-23.36	-21.35		-37.32	-35.43	-27.69						
19-May-2009	18:00:00	-2.13	-9.60	-26.10	-19.22	-24.32	-23.09		-37.21	-35.34	-27.60						
20-May-2009	0:00:00	-4.69	-11.82	-29.66	-22.03	-26.24	-26.41		-39.45	-37.69	-29.91						
20-May-2009	6:00:00	-4.60	-11.42	-30.30	-22.13	-25.78	-26.74		-39.07	-37.35	-29.53						
20-May-2009	12:00:00	-3.66	-10.87	-29.64	-21.10	-25.08	-25.93		-37.44	-35.62	-27.85						
20-May-2009	18:00:00	-5.03	-12.08	-31.13	-21.88	-26.34	-27.54		-37.22	-35.41	-27.68						
21-May-2009	0:00:00	-6.11	-12.61	-32.48	-22.65	-26.38	-28.70		-37.71	-35.97	-28.09						
21-May-2009	6:00:00	-7.60	-13.48	-34.01	-23.81	-27.08	-29.96		-38.55	-36.75	-29.05						
21-May-2009	12:00:00	-7.71	-13.35	-32.91	-23.18	-26.83	-29.38		-37.44	-35.70	-27.81						
21-May-2009	18:00:00	-9.69	-14.36	-32.78	-23.80	-28.10	-30.49		-37.21	-35.52	-27.63						
22-May-2009	0:00:00	-10.84	-14.67	-32.95	-24.29	-28.40	-31.57		-37.50	-35.59	-27.89						
22-May-2009	6:00:00	-11.59	-14.61	-32.97	-24.70	-28.10	-32.08		-37.46	-35.72	-27.97						
22-May-2009	12:00:00	-12.65	-15.66	-32.85	-24.98	-28.78	-32.50		-37.42	-35.64	-27.86						
22-May-2009	18:00:00	-14.56	-16.66	-32.83	-25.58	-30.28	-33.42		-37.35	-35.53	-27.71						
23-May-2009	0:00:00	-14.95	-16.47	-32.69	-25.97	-30.42	-34.19		-37.34	-35.44	-27.78						
23-May-2009	6:00:00	-15.36	-16.50	-32.81	-26.17	-30.32	-34.52		-37.38	-35.52	-27.85						
23-May-2009	12:00:00	-16.12	-17.52	-32.89	-26.62	-30.79	-34.92		-37.35	-35.55	-27.67						
23-May-2009	18:00:00	-17.47	-18.51	-32.75	-27.17	-32.26	-35.64		-37.29	-35.50	-27.68						
24-May-2009	0:00:00	-17.92	-18.51	-32.82	-27.73	-32.89	-36.48		-37.30	-35.48	-27.71				0.03		
24-May-2009	6:00:00	-18.04	-18.38	-32.72	-28.00	-32.77	-36.77		-37.34	-35.59	-27.78						
24-May-2009	12:00:00	-18.60	-19.30	-32.71	-28.31	-33.05	-37.06		-37.29	-35.43	-27.66						
24-May-2009	18:00:00	-19.12	-19.64	-32.65	-28.60	-33.04	-37.43		-37.17	-35.37	-27.62						
25-May-2009	0:00:00	-19.35	-19.47	-32.72	-28.94	-32.92	-37.43		-37.24	-35.49	-27.61						
25-May-2009	6:00:00	-19.53	-19.30	-32.64	-29.03	-32.96	-37.32		-37.18	-35.37	-27.56						
25-May-2009	12:00:00	-19.97	-20.14	-32.65	-29.31	-32.98	-37.28		-37.20	-35.34	-27.68						
25-May-2009	18:00:00	-20.91	-21.03	-32.81	-29.85	-33.01	-37.28		-37.23	-35.49	-27.66						
26-May-2009	0:00:00	-21.25	-21.00	-32.70	-30.01	-32.95	-37.25		-37.21	-35.44	-27.54						
26-May-2009	6:00:00	-21.41	-20.92	-32.72	-30.17	-32.88	-37.31		-37.18	-35.38	-27.60						
26-May-2009	12:00:00	-21.78	-21.64	-32.71	-30.51	-32.93	-37.20		-37.20	-35.50	-27.61						
26-May-2009	18:00:00	-22.47	-22.33	-32.67	-30.74	-32.92	-37.12		-37.11	-35.47	-27.57						
27-May-2009	0:00:00	-22.85	-22.18	-32.69	-31.05	-32.86	-37.22		-37.14	-35.38	-27.65	0.20	0.00	1.95			
27-May-2009	6:00:00	-22.85	-21.92	-32.67	-31.17	-32.77	-37.13		-37.11	-35.47	-27.55						
27-May-2009	12:00:00	-23.73	-22.81	-32.81	-32.23	-33.07	-37.39		-37.30	-35.60	-27.78						
27-May-2009	18:00:00	-24.36	-23.50	-32.76	-32.35	-32.94	-37.21		-37.09	-35.42	-27.61						
28-May-2009	0:00:00	-24.66	-23.35	-32.71	-32.53	-32.82	-37.10		-37.15	-35.42	-27.50						
28-May-2009	6:00:00	-24.89	-23.48	-32.84	-32.79	-33.06	-37.33		-37.29	-35.64	-27.73						
28-May-2009	12:00:00	-25.31	-24.16	-32.77	-33.10	-33.11	-37.25		-37.29	-35.53	-27.65						
28-May-2009	18:00:00	-25.77	-24.57	-32.70	-33.26	-32.87	-37.19		-37.20	-35.49	-27.55						
29-May-2009	0:00:00	-26.09	-24.46	-32.78	-33.62	-32.98	-37.22		-37.22	-35.49	-27.67						
29-May-2009	6:00:00	-26.27	-24.33	-32.73	-33.82	-32.93	-37.26		-37.17	-35.50	-27.67						
29-May-2009	12:00:00	-26.67	-24.93	-32.87	-34.21	-33.02	-37.33		-37.34	-35.59	-27.78						
29-May-2009	18:00:00	-27.24	-25.57	-32.77	-34.49	-33.06	-37.30		-37.26	-35.58	-27.79						
30-May-2009	0:00:00	-27.52	-25.34	-32.72	-34.13	-32.86	-37.09		-37.10	-35.46	-27.59						
30-May-2009	6:00:00	-27.83	-25.28	-32.67	-34.23	-32.88	-37.14		-37.23	-35.50	-27.60						
30-May-2009	12:00:00	-28.32	-26.05	-32.73	-34.22	-32.94	-37.32		-37.34	-35.60	-27.74						
30-May-2009	18:00:00	-28.39	-26.49	-32.78	-34.16	-32.86	-37.22		-37.16	-35.48	-27.69						

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
31-May-2009	0:00:00	-28.38	-26.22	-32.72	-34.16	-32.90	-37.25		-37.18	-35.47	-27.63						
31-May-2009	6:00:00	-28.35	-25.98	-32.66	-34.01	-32.89	-37.19		-37.11	-35.41	-27.53						
31-May-2009	12:00:00	-28.33	-26.62	-32.75	-34.10	-32.96	-37.24		-37.09	-35.53	-27.62						
31-May-2009	18:00:00	-28.32	-27.16	-32.65	-34.00	-32.87	-37.10		-37.16	-35.38	-27.57						
1-Jun-2009	0:00:00	-28.26	-26.91	-32.71	-34.07	-32.86	-37.09		-37.03	-35.36	-27.56						
1-Jun-2009	6:00:00	-28.31	-26.96	-32.72	-34.05	-32.84	-37.14		-37.12	-35.48	-27.56						
1-Jun-2009	12:00:00	-28.41	-27.72	-32.77	-34.21	-33.00	-37.27		-37.22	-35.48	-27.73						
1-Jun-2009	18:00:00	-28.29	-28.08	-32.65	-34.11	-32.82	-37.16		-37.06	-35.40	-27.59						
2-Jun-2009	0:00:00	-28.29	-27.42	-32.64	-34.03	-32.86	-37.10		-37.02	-35.34	-27.57					2.24	
2-Jun-2009	6:00:00	-28.31	-27.26	-32.67	-34.16	-32.94	-37.20		-37.10	-35.55	-27.59						
2-Jun-2009	12:00:00	-28.37	-28.02	-32.82	-34.17	-33.02	-37.14		-37.04	-35.43	-27.73						
2-Jun-2009	18:00:00	-28.33	-28.47	-32.69	-34.09	-32.95	-37.08		-37.02	-35.38	-27.63						
3-Jun-2009	0:00:00	-28.55	-28.26	-32.88	-34.33	-33.13	-37.46		-37.40	-35.67	-27.80						
3-Jun-2009	6:00:00	-28.27	-27.64	-32.67	-34.04	-32.94	-37.14		-37.04	-35.38	-27.56						
3-Jun-2009	12:00:00	-28.35	-28.66	-32.75	-34.19	-32.96	-37.18		-37.04	-35.55	-27.65						
3-Jun-2009	18:00:00	-28.32	-28.63	-32.66	-33.94	-32.87	-37.04		-36.91	-35.37	-27.48						
4-Jun-2009	0:00:00	-28.23	-28.24	-32.59	-33.99	-32.88	-37.03		-36.94	-35.44	-27.51				0.08		
4-Jun-2009	6:00:00	-28.21	-27.99	-32.65	-34.03	-32.88	-37.12		-36.90	-35.36	-27.56						
4-Jun-2009	12:00:00	-28.30	-28.53	-32.71	-34.07	-32.84	-37.18		-37.09	-35.47	-27.67						
4-Jun-2009	18:00:00	-28.19	-28.39	-32.59	-34.05	-32.87	-37.06		-36.87	-35.40	-27.55						
5-Jun-2009	0:00:00	-28.35	-28.47	-32.76	-34.13	-32.88	-37.02		-37.00	-35.35	-27.55				1.69		
5-Jun-2009	6:00:00	-3.90	-8.22	-30.18	-30.87	-32.95	-25.04		-37.04	-35.36	-27.55						
5-Jun-2009	12:00:00	-0.91	-9.60	-17.17	-28.53	-32.87	-32.46		-36.98	-35.35	-27.57						
5-Jun-2009	18:00:00	-1.33	-11.37	-18.95	-19.04	-32.78	-35.17		-36.98	-35.34	-27.59						
6-Jun-2009	0:00:00	-0.34	-2.12	-11.78	-2.31	-32.89	-28.30		-37.02	-30.60	-27.56						
6-Jun-2009	6:00:00	-0.96	-4.46	-12.47	-3.51	-33.12	-30.46		-37.14	-33.64	-27.73						
6-Jun-2009	12:00:00	-0.85	-5.36	-13.51	-5.35	-32.92	-31.66		-37.02	-35.22	-27.60						
6-Jun-2009	18:00:00	-1.09	-6.60	-15.38	-6.52	-32.92	-32.78		-37.06	-35.52	-27.60						
7-Jun-2009	0:00:00	-1.33	-7.03	-15.51	-6.93	-33.05	-33.89		-37.12	-35.73	-27.71						
7-Jun-2009	6:00:00	-1.42	-7.26	-16.37	-7.24	-33.02	-34.57		-37.16	-35.73	-27.65						
7-Jun-2009	12:00:00	-1.37	-8.20	-17.99	-7.89	-32.90	-35.08		-37.11	-35.58	-27.65						
7-Jun-2009	18:00:00	-1.72	-9.21	-20.22	-8.51	-32.95	-35.80		-37.04	-35.56	-27.62						
8-Jun-2009	0:00:00	-1.65	-8.92	-21.42	-8.26	-32.92	-36.48		-36.98	-35.52	-27.60				0.01		
8-Jun-2009	6:00:00	-1.59	-8.78	-22.21	-8.18	-32.82	-36.80		-37.02	-35.43	-27.50						
8-Jun-2009	12:00:00	-1.72	-9.75	-23.71	-8.99	-32.83	-37.33		-37.04	-35.41	-27.66						
8-Jun-2009	18:00:00	-2.35	-11.16	-26.19	-10.04	-32.98	-37.12		-37.10	-35.40	-27.65						
9-Jun-2009	0:00:00	-2.26	-11.01	-27.23	-9.33	-32.84	-37.03		-36.94	-35.31	-27.49				0.91		
9-Jun-2009	6:00:00	-2.57	-11.14	-28.11	-9.56	-32.90	-37.15		-37.05	-35.46	-27.65						
9-Jun-2009	12:00:00	-3.37	-12.46	-29.42	-10.89	-32.96	-37.15		-37.02	-35.38	-27.61						
9-Jun-2009	18:00:00	0.96	0.29	-14.37	-1.67	-32.75	-23.89		-36.88	-17.20	-27.43						
10-Jun-2009	0:00:00	-0.19	-0.42	-9.85	-0.57	-32.90	-22.39		-36.93	-23.38	-27.51				0.01		
10-Jun-2009	6:00:00	-0.59	-1.21	-10.02	-1.69	-31.68	-22.96		-37.08	-26.70	-27.67						
10-Jun-2009	12:00:00	-0.83	-2.37	-11.25	-2.81	-31.91	-23.82		-37.11	-29.18	-27.71						
10-Jun-2009	18:00:00	-0.94	-4.08	-12.20	-3.87	-32.98	-25.69		-36.96	-31.50	-27.55						
11-Jun-2009	0:00:00	-0.83	-4.15	-12.32	-4.33	-33.02	-26.87		-36.93	-33.44	-27.48				0.01		
11-Jun-2009	6:00:00	-1.06	-4.26	-12.87	-4.95	-33.17	-27.72		-37.03	-35.11	-27.62						
11-Jun-2009	12:00:00	-1.31	-6.15	-14.66	-5.87	-33.11	-28.64		-36.96	-35.64	-27.55						
11-Jun-2009	18:00:00	-1.37	-7.22	-17.29	-6.43	-32.92	-30.16		-36.85	-35.55	-27.49						
12-Jun-2009	0:00:00	-1.45	-6.92	-18.03	-6.63	-32.99	-31.28		-36.93	-35.54	-27.53						
12-Jun-2009	6:00:00	-1.45	-6.82	-18.69	-6.75	-33.00	-31.82		-36.98	-35.54	-27.54						

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
12-Jun-2009	12:00:00	-2.07	-9.09	-21.65	-7.97	-33.14	-32.88		-37.03	-35.73	-27.63						
12-Jun-2009	18:00:00	-2.52	-10.77	-24.77	-9.08	-33.05	-34.15		-36.97	-35.56	-27.57						
13-Jun-2009	0:00:00	-2.61	-10.69	-26.18	-8.69	-33.02	-35.27		-36.93	-35.68	-27.53						
13-Jun-2009	6:00:00	-2.76	-10.63	-26.61	-8.53	-32.89	-35.89		-36.81	-35.54	-27.49						
13-Jun-2009	12:00:00	-3.96	-12.20	-28.40	-10.10	-33.05	-36.78		-36.99	-35.78	-27.65						
13-Jun-2009	18:00:00	-5.56	-13.69	-30.55	-10.90	-32.96	-37.16		-36.84	-35.48	-27.57						
14-Jun-2009	0:00:00	-6.18	-13.68	-31.50	-10.51	-33.04	-36.90		-36.96	-35.58	-27.56				0.05		
14-Jun-2009	6:00:00	-6.85	-14.04	-32.12	-10.55	-33.01	-37.07		-36.91	-35.62	-27.55						
14-Jun-2009	12:00:00	-7.96	-14.70	-32.78	-11.59	-33.14	-37.12		-37.00	-35.74	-27.65						
14-Jun-2009	18:00:00	-8.80	-15.12	-32.75	-11.71	-32.98	-37.01		-36.93	-35.53	-27.53						
15-Jun-2009	0:00:00	-9.61	-15.10	-32.79	-11.37	-32.96	-37.01		-36.85	-35.58	-27.57						
15-Jun-2009	6:00:00	-10.42	-15.25	-32.76	-11.56	-33.12	-37.08		-36.92	-35.68	-27.60						
15-Jun-2009	12:00:00	-11.40	-15.64	-32.81	-12.14	-33.18	-37.15		-37.12	-35.68	-27.72						
15-Jun-2009	18:00:00	-12.97	-16.38	-32.73	-12.92	-33.10	-37.06		-37.11	-35.66	-27.59						
16-Jun-2009	0:00:00	-13.71	-16.41	-32.71	-12.93	-33.07	-37.06		-36.98	-35.66	-27.57				0.05		
16-Jun-2009	6:00:00	-14.34	-16.70	-32.67	-13.04	-33.13	-37.12		-37.12	-35.67	-27.68						
16-Jun-2009	12:00:00	-14.17	-16.93	-32.83	-13.29	-33.23	-37.22		-37.16	-35.84	-27.67						
16-Jun-2009	18:00:00	-15.37	-17.54	-32.57	-14.13	-33.10	-37.10		-36.94	-35.66	-27.54						
17-Jun-2009	0:00:00	-15.77	-17.26	-32.53	-14.01	-32.93	-37.02		-36.84	-35.53	-27.45						
17-Jun-2009	6:00:00	-16.13	-17.36	-32.58	-14.27	-33.11	-37.08		-36.92	-35.62	-27.55						
17-Jun-2009	12:00:00	-16.68	-18.00	-32.66	-15.17	-33.12	-37.16		-37.05	-35.71	-27.61						
17-Jun-2009	18:00:00	-17.68	-18.80	-32.75	-16.36	-33.11	-37.14		-37.10	-35.64	-27.57						
18-Jun-2009	0:00:00	-17.93	-18.37	-32.57	-16.45	-32.95	-37.08		-36.88	-35.60	-27.43				0.01		
18-Jun-2009	6:00:00	-18.10	-18.32	-32.77	-16.78	-33.08	-37.10		-36.94	-35.58	-27.50						
18-Jun-2009	12:00:00	-18.71	-19.18	-32.89	-17.73	-33.24	-37.30		-37.17	-35.74	-27.69						
18-Jun-2009	18:00:00	-19.29	-19.60	-32.71	-18.39	-33.01	-37.15		-36.99	-35.65	-27.43						
19-Jun-2009	0:00:00	-19.50	-19.29	-32.61	-18.56	-33.00	-37.01		-36.93	-35.55	-27.37						
19-Jun-2009	6:00:00	-19.77	-19.42	-32.70	-18.99	-33.10	-37.22		-37.11	-35.65	-27.55						
19-Jun-2009	12:00:00	-20.43	-20.54	-32.78	-19.93	-33.16	-37.26		-37.06	-35.64	-27.63						
19-Jun-2009	18:00:00	-21.24	-21.25	-32.77	-21.14	-33.20	-37.32		-37.00	-35.71	-27.57						
20-Jun-2009	0:00:00	-21.52	-20.71	-32.78	-21.44	-33.06	-37.09		-37.02	-35.60	-27.60						
20-Jun-2009	6:00:00	-21.63	-20.48	-32.75	-21.50	-33.00	-37.10		-36.98	-35.61	-27.51						
20-Jun-2009	12:00:00	-22.21	-21.62	-32.77	-22.30	-33.18	-37.28		-37.12	-35.62	-27.62						
20-Jun-2009	18:00:00	-22.91	-22.33	-32.69	-23.35	-33.06	-37.16		-37.04	-35.60	-27.50						
21-Jun-2009	0:00:00	-23.23	-21.86	-32.55	-23.83	-32.86	-37.10		-36.86	-35.50	-27.39						
21-Jun-2009	6:00:00	-23.65	-21.80	-32.77	-24.31	-33.07	-37.18		-36.97	-35.55	-27.56						
21-Jun-2009	12:00:00	-24.10	-22.99	-32.75	-24.92	-33.05	-37.08		-36.99	-35.61	-27.59						
21-Jun-2009	18:00:00	-24.73	-23.61	-32.57	-25.88	-33.01	-37.04		-36.88	-35.58	-27.43						
22-Jun-2009	0:00:00	-25.31	-23.34	-32.71	-26.45	-33.08	-37.09		-36.98	-35.67	-27.56						
22-Jun-2009	6:00:00	-25.67	-23.31	-32.78	-26.87	-33.12	-37.20		-37.08	-35.74	-27.59						
22-Jun-2009	12:00:00	-26.01	-24.24	-32.75	-27.33	-33.07	-37.15		-37.00	-35.56	-27.50						
22-Jun-2009	18:00:00	-26.47	-24.80	-32.65	-28.05	-33.01	-37.03		-36.88	-35.52	-27.51						
23-Jun-2009	0:00:00	-26.82	-24.36	-32.69	-28.41	-33.11	-37.10		-36.99	-35.50	-27.54	0.00	0.00	2.60	0.02		
23-Jun-2009	6:00:00	-27.00	-24.21	-32.65	-28.70	-33.00	-37.07		-36.91	-35.56	-27.54						
23-Jun-2009	12:00:00	-27.61	-25.35	-32.76	-29.14	-33.17	-37.25		-37.02	-35.76	-27.60						
23-Jun-2009	18:00:00	-27.52	-25.89	-32.72	-29.23	-32.87	-37.15		-37.04	-35.44	-27.59						
24-Jun-2009	0:00:00	-27.84	-24.33	-32.67	-29.61	-32.88	-37.24		-36.96	-35.48	-27.54						
24-Jun-2009	6:00:00	-27.90	-23.97	-32.59	-29.69	-32.89	-37.25		-37.00	-35.44	-27.50						
24-Jun-2009	12:00:00	-28.26	-25.03	-32.84	-29.89	-33.10	-37.32		-37.17	-35.52	-27.66						
24-Jun-2009	18:00:00	-28.32	-25.76	-32.71	-30.09	-32.94	-37.25		-37.00	-35.38	-27.59						

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
25-Jun-2009	0:00:00	-28.31	-25.58	-32.78	-30.46	-33.00	-37.20		-37.09	-35.46	-27.62						
25-Jun-2009	6:00:00	-28.35	-25.30	-32.70	-30.65	-33.01	-37.22		-37.08	-35.42	-27.57						
25-Jun-2009	12:00:00	-28.31	-26.42	-32.66	-30.63	-32.88	-37.21		-37.05	-35.34	-27.63						
25-Jun-2009	18:00:00	-28.21	-27.25	-32.67	-31.19	-32.87	-37.18		-37.02	-35.35	-27.53						
26-Jun-2009	0:00:00	-28.26	-26.58	-32.67	-31.55	-32.93	-37.13		-37.02	-35.38	-27.60						
26-Jun-2009	6:00:00	-28.25	-26.14	-32.69	-31.85	-32.89	-37.12		-36.96	-35.41	-27.67						
26-Jun-2009	12:00:00	-28.25	-27.56	-32.72	-32.03	-32.96	-37.18		-36.98	-35.48	-27.61						
26-Jun-2009	18:00:00	-28.15	-28.35	-32.52	-32.45	-32.88	-37.08		-36.88	-35.24	-27.51						
27-Jun-2009	0:00:00	-28.19	-27.62	-32.63	-32.84	-32.90	-37.12		-37.04	-35.43	-27.71						
27-Jun-2009	6:00:00	-28.25	-27.30	-32.72	-33.14	-32.96	-37.16		-37.00	-35.40	-27.68						
27-Jun-2009	12:00:00	-28.27	-28.44	-32.83	-33.58	-32.98	-37.21		-37.10	-35.55	-27.68						
27-Jun-2009	18:00:00	-28.08	-28.30	-32.70	-33.92	-32.93	-37.07		-36.92	-35.41	-27.59						
28-Jun-2009	0:00:00	-28.42	-28.58	-32.81	-34.40	-33.18	-37.33		-37.15	-35.58	-27.73						
28-Jun-2009	6:00:00	-28.48	-28.69	-33.00	-34.75	-33.19	-37.44		-37.24	-35.64	-27.87						
28-Jun-2009	12:00:00	-28.27	-28.42	-32.72	-34.04	-32.95	-37.14		-36.99	-35.40	-27.62						
28-Jun-2009	18:00:00	-28.19	-28.40	-32.73	-34.04	-32.93	-37.10		-37.08	-35.37	-27.63						
29-Jun-2009	0:00:00	-28.32	-28.44	-32.77	-34.06	-33.00	-37.13		-37.02	-35.40	-27.57						
29-Jun-2009	6:00:00	-28.21	-28.39	-32.81	-34.05	-32.98	-37.10		-37.06	-35.48	-27.59						
29-Jun-2009	12:00:00	-28.18	-28.48	-32.82	-34.21	-33.07	-37.20		-37.09	-35.54	-27.81						
29-Jun-2009	18:00:00	-28.17	-28.36	-32.67	-34.04	-32.99	-37.18		-37.02	-35.34	-27.67						
30-Jun-2009	0:00:00	-28.12	-28.35	-32.73	-34.06	-32.94	-37.10		-37.08	-35.40	-27.60						
30-Jun-2009	6:00:00	-28.51	-28.69	-33.03	-34.47	-33.29	-37.60		-37.44	-35.84	-27.86						
30-Jun-2009	12:00:00	-28.17	-28.48	-32.78	-34.16	-32.90	-37.28		-37.04	-35.44	-27.68						
30-Jun-2009	18:00:00	-28.07	-28.36	-32.69	-34.16	-32.93	-37.18		-37.02	-35.40	-27.66						
1-Jul-2009	0:00:00	-28.00	-28.38	-32.64	-34.03	-32.82	-37.10		-36.94	-35.40	-27.54						
1-Jul-2009	6:00:00	-28.13	-28.40	-32.77	-34.12	-32.98	-37.18		-37.06	-35.53	-27.66						
1-Jul-2009	12:00:00	-28.26	-28.47	-32.77	-34.19	-33.07	-37.20		-37.14	-35.53	-27.72						
1-Jul-2009	18:00:00	-28.06	-28.39	-32.78	-34.13	-32.98	-37.12		-37.04	-35.49	-27.63						
2-Jul-2009	0:00:00	-28.06	-28.45	-32.69	-34.11	-32.98	-37.08		-37.05	-35.44	-27.60					2.84	
2-Jul-2009	6:00:00	-28.06	-28.57	-32.72	-34.17	-32.96	-37.18		-37.15	-35.49	-27.69						
2-Jul-2009	12:00:00	-28.08	-28.52	-32.83	-34.23	-32.99	-37.18		-37.03	-35.42	-27.69						
2-Jul-2009	18:00:00	-28.01	-28.44	-32.69	-34.19	-32.88	-37.12		-37.00	-35.50	-27.67						
3-Jul-2009	0:00:00	-27.97	-28.46	-32.66	-34.17	-32.89	-37.10		-37.09	-35.43	-27.66						
3-Jul-2009	6:00:00	-28.17	-28.66	-33.01	-34.41	-33.13	-37.32		-37.26	-35.66	-27.79						
3-Jul-2009	12:00:00	-28.12	-28.53	-32.81	-34.24	-33.07	-37.22		-37.16	-35.53	-27.69						
3-Jul-2009	18:00:00	-27.99	-28.47	-32.77	-34.07	-32.93	-37.03		-36.97	-35.49	-27.59						
4-Jul-2009	0:00:00	-27.91	-28.38	-32.77	-34.10	-32.88	-37.10		-36.96	-35.46	-27.57						
4-Jul-2009	6:00:00	-28.56	-29.12	-33.24	-34.69	-33.49	-37.69		-37.58	-36.07	-28.23						
4-Jul-2009	12:00:00	-28.00	-28.46	-32.85	-34.18	-32.96	-37.10		-37.04	-35.54	-27.73						
4-Jul-2009	18:00:00	-28.01	-28.48	-32.73	-34.06	-32.99	-37.09		-37.03	-35.47	-27.73						
5-Jul-2009	0:00:00	-27.93	-28.46	-32.67	-34.05	-32.96	-37.08		-37.00	-35.44	-27.59						
5-Jul-2009	6:00:00	-27.95	-28.45	-32.71	-34.11	-32.87	-37.15		-37.00	-35.43	-27.66						
5-Jul-2009	12:00:00	-27.91	-28.44	-32.82	-34.12	-32.89	-37.12		-37.00	-35.46	-27.59						
5-Jul-2009	18:00:00	-27.95	-28.44	-32.73	-34.12	-32.89	-37.12		-37.02	-35.46	-27.63						
6-Jul-2009	0:00:00	-27.81	-28.41	-32.59	-34.07	-32.96	-36.97		-36.85	-35.31	-27.61						
6-Jul-2009	6:00:00	0.21	-9.18	-11.42	-22.51	-33.04	-36.58		-37.00	-35.67	-27.72						
6-Jul-2009	12:00:00	-0.65	-12.26	-12.45	-15.55	-33.06	-37.19		-37.16	-35.73	-27.67						
6-Jul-2009	18:00:00	-1.21	-13.80	-14.52	-12.46	-33.06	-37.22		-37.15	-35.73	-27.69						
7-Jul-2009	0:00:00	-1.56	-14.08	-16.40	-11.69	-32.95	-37.08		-37.02	-35.53	-27.60						
7-Jul-2009	6:00:00	-2.01	-14.49	-17.77	-11.72	-33.07	-37.20		-37.09	-35.79	-27.80						

Date	Time	Water Level (inches)													On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2				
7-Jul-2009	12:00:00	-2.97	-16.18	-20.42	-12.40	-33.06	-37.15		-37.12	-35.65	-27.71						
7-Jul-2009	18:00:00	-4.49	-17.49	-23.67	-13.28	-32.96	-37.08		-36.92	-35.55	-27.59						
8-Jul-2009	0:00:00	-5.82	-17.47	-26.13	-13.37	-33.13	-37.31		-37.16	-35.79	-27.83						
8-Jul-2009	6:00:00	-7.05	-17.78	-27.56	-13.89	-33.36	-37.55		-37.32	-35.97	-27.93						
8-Jul-2009	12:00:00	-9.10	-19.33	-29.04	-15.49	-33.13	-37.26		-37.11	-35.72	-27.77						
8-Jul-2009	18:00:00	-12.34	-20.32	-30.69	-17.14	-32.80	-37.02		-36.94	-35.50	-27.56						
9-Jul-2009	0:00:00	-13.67	-20.07	-32.41	-17.45	-32.96	-37.06		-36.86	-35.62	-27.55						
9-Jul-2009	6:00:00	-14.58	-20.16	-32.59	-18.14	-32.89	-37.16		-36.84	-35.54	-27.54						
9-Jul-2009	12:00:00	-16.12	-21.42	-32.75	-19.93	-33.04	-37.14		-37.03	-35.70	-27.68						
9-Jul-2009	18:00:00	-17.61	-22.34	-32.78	-21.67	-32.92	-37.19		-36.99	-35.74	-27.65						
10-Jul-2009	0:00:00	-18.33	-22.02	-32.69	-22.36	-32.89	-37.04		-36.98	-35.65	-27.57						
10-Jul-2009	6:00:00	-19.08	-22.28	-32.97	-23.15	-33.20	-37.40		-37.23	-36.02	-27.91						
10-Jul-2009	12:00:00	-19.77	-23.31	-32.77	-23.96	-33.05	-37.18		-37.08	-35.68	-27.71						
10-Jul-2009	18:00:00	-20.75	-24.25	-32.77	-25.06	-33.04	-37.20		-37.00	-35.68	-27.56						
11-Jul-2009	0:00:00	-21.46	-24.10	-32.97	-25.87	-33.24	-37.33		-37.23	-35.92	-27.83						
11-Jul-2009	6:00:00	-22.25	-24.25	-33.35	-26.75	-33.61	-37.80		-37.60	-36.34	-28.32						
11-Jul-2009	12:00:00	-22.19	-24.73	-32.73	-26.80	-33.02	-37.16		-37.06	-35.65	-27.66						
11-Jul-2009	18:00:00	-22.87	-25.86	-32.76	-27.62	-33.08	-37.14		-37.03	-35.70	-27.72						
12-Jul-2009	0:00:00	-23.10	-25.20	-32.63	-27.93	-32.94	-36.98		-36.96	-35.61	-27.69						
12-Jul-2009	6:00:00	-23.50	-25.05	-32.75	-28.25	-33.00	-37.07		-37.09	-35.70	-27.69						
12-Jul-2009	12:00:00	-23.94	-26.49	-32.65	-28.93	-32.98	-37.08		-37.00	-35.65	-27.66						
12-Jul-2009	18:00:00	-24.42	-27.33	-32.61	-29.48	-32.81	-37.00		-36.92	-35.52	-27.50						
13-Jul-2009	0:00:00	-24.59	-26.76	-32.61	-29.80	-32.82	-36.97		-36.90	-35.52	-27.51						
13-Jul-2009	6:00:00	-0.22	-8.70	0.30	-13.39	-32.92	-37.18		-37.02	-35.71	-27.60						
13-Jul-2009	12:00:00	-0.63	-11.11	-0.57	-8.97	-32.87	-37.18		-36.98	-35.55	-27.61						
13-Jul-2009	18:00:00	-1.00	-12.24	-1.55	-8.67	-33.08	-37.25		-37.18	-35.66	-27.72						
14-Jul-2009	0:00:00	-1.26	-12.70	-2.64	-8.69	-33.01	-37.28		-37.02	-35.55	-27.63						
14-Jul-2009	6:00:00	-1.48	-12.86	-3.66	-8.77	-32.94	-37.24		-37.00	-35.64	-27.62						
14-Jul-2009	12:00:00	-2.10	-14.19	-5.88	-9.80	-33.10	-37.34		-37.08	-35.77	-27.68						
14-Jul-2009	18:00:00	-2.93	-15.74	-9.85	-10.45	-32.94	-37.27		-36.91	-35.55	-27.56						
15-Jul-2009	0:00:00	-3.52	-15.81	-11.60	-10.24	-33.04	-37.40		-37.09	-35.72	-27.66						
15-Jul-2009	6:00:00	-4.42	-16.26	-13.07	-10.45	-33.23	-37.56		-37.16	-35.80	-27.89						
15-Jul-2009	12:00:00	-6.04	-17.96	-15.38	-12.09	-33.10	-37.43		-37.11	-35.80	-27.84						
15-Jul-2009	18:00:00	-8.93	-19.54	-18.72	-13.25	-32.96	-37.18		-37.06	-35.64	-27.68						
16-Jul-2009	0:00:00	-9.87	-19.08	-20.04	-12.43	-32.93	-37.12		-36.97	-35.56	-27.62						
16-Jul-2009	6:00:00	-10.74	-19.05	-21.01	-12.52	-32.99	-37.12		-37.00	-35.60	-27.54						
16-Jul-2009	12:00:00	-12.95	-20.73	-22.51	-14.54	-33.05	-37.22		-37.11	-35.73	-27.73						
16-Jul-2009	18:00:00	-14.71	-21.36	-24.17	-15.37	-33.02	-37.10		-37.08	-35.60	-27.61						
17-Jul-2009	0:00:00	-15.17	-20.95	-25.07	-15.17	-32.90	-36.98		-36.87	-35.48	-27.59						
17-Jul-2009	6:00:00	-15.59	-20.80	-25.58	-15.16	-32.84	-36.95		-36.87	-35.50	-27.55						
17-Jul-2009	12:00:00	-16.68	-22.34	-26.73	-17.06	-33.01	-37.09		-36.98	-35.58	-27.57						
17-Jul-2009	18:00:00	1.46	-2.49	-2.87	-3.99	-32.92	-23.57		-36.98	-33.00	-27.62						
18-Jul-2009	0:00:00	-0.18	-4.06	1.36	-0.67	-33.02	-31.70		-37.11	-35.72	-27.71						
18-Jul-2009	6:00:00	-0.29	-6.06	1.48	-1.61	-32.99	-35.65		-36.99	-35.56	-27.63						
18-Jul-2009	12:00:00	-0.66	-8.36	0.52	-2.84	-33.00	-37.07		-37.03	-35.64	-27.50						
18-Jul-2009	18:00:00	-0.88	-10.45	-1.43	-4.13	-32.86	-36.97		-36.96	-35.53	-27.45						
19-Jul-2009	0:00:00	-1.24	-10.72	-2.18	-4.97	-33.01	-37.14		-37.12	-35.72	-27.66						
19-Jul-2009	6:00:00	-1.37	-10.92	-3.02	-5.49	-33.06	-37.15		-37.00	-35.71	-27.59						
19-Jul-2009	12:00:00	-1.89	-12.16	-5.05	-6.27	-33.02	-37.16		-37.11	-35.71	-27.60						
19-Jul-2009	18:00:00	-2.59	-13.83	-9.02	-7.25	-32.94	-37.02		-36.97	-35.59	-27.55						

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
20-Jul-2009	0:00:00	-2.88	-13.75	-10.10	-7.10	-32.92	-37.02		-37.00	-35.60	-27.57					
20-Jul-2009	6:00:00	-3.24	-13.66	-10.81	-7.06	-32.94	-37.12		-36.97	-35.77	-27.63					
20-Jul-2009	12:00:00	-4.19	-14.98	-12.66	-8.02	-33.06	-37.19		-37.10	-35.72	-27.67					
20-Jul-2009	18:00:00	13.98	17.06	2.63	13.51	7.70	0.24		-36.94	-34.59	-27.54					
21-Jul-2009	0:00:00	7.59	12.66	2.20	11.75	16.67	0.35		7.05	4.19	-27.74				0.01	
21-Jul-2009	6:00:00	0.12	1.72	1.77	4.83	9.74	-0.28		3.81	1.66	0.17					
21-Jul-2009	12:00:00	-0.18	-0.31	1.23	0.53	4.92	-1.13		1.89	-0.08	-0.73					
21-Jul-2009	18:00:00	-0.45	-0.74	-0.32	-1.22	3.53	-2.29		0.64	-1.58	-1.49					
22-Jul-2009	0:00:00	-0.49	-0.85	-0.24	-1.78	2.68	-3.35		0.04	-3.04	-2.24				0.02	
22-Jul-2009	6:00:00	-0.73	-1.45	-0.60	-2.79	1.75	-4.37		-0.76	-4.88	-3.39					
22-Jul-2009	12:00:00	-0.73	-2.68	-1.79	-3.28	1.21	-5.05		-1.11	-7.71	-5.66					
22-Jul-2009	18:00:00	-0.75	-3.19	-2.97	-3.63	0.54	-5.75		-1.59	-12.49	-9.12					
23-Jul-2009	0:00:00	-0.81	-3.14	-3.41	-3.89	-0.12	-6.32		-2.12	-14.88	-12.24				0.88	
23-Jul-2009	6:00:00	-0.79	-3.45	-3.99	-4.28	-0.71	-6.74		-2.62	-16.78	-15.33					
23-Jul-2009	12:00:00	-1.12	-5.05	-5.67	-4.93	-1.55	-7.99		-3.45	-19.52	-19.34					
23-Jul-2009	18:00:00	1.94	1.06	-2.58	-0.46	1.63	-1.62		-1.04	-3.12	-5.61					
24-Jul-2009	0:00:00	0.18	0.62	1.86	0.27	1.66	-1.27		0.71	-8.76	-8.77				0.24	
24-Jul-2009	6:00:00	1.02	0.86	2.86	-0.34	2.06	-0.79		0.53	-5.85	-6.91					
24-Jul-2009	12:00:00	0.12	0.10	1.43	-0.50	1.51	-1.01		-0.05	-10.62	-11.59					
24-Jul-2009	18:00:00	-0.22	-0.36	-0.42	-1.37	0.66	-1.78		-0.66	-16.23	-17.15					
25-Jul-2009	0:00:00	-0.24	-0.24	-0.19	-2.00	0.17	-2.35		-1.03	-18.52	-19.77					
25-Jul-2009	6:00:00	-0.59	-0.70	-0.66	-2.89	-0.53	-3.17		-1.63	-19.98	-21.62					
25-Jul-2009	12:00:00	-0.77	-1.98	-2.19	-3.34	-1.24	-4.06		-1.94	-22.27	-27.85					
25-Jul-2009	18:00:00	-0.96	-4.64	-6.51	-4.41	-2.34	-5.30		-2.67	-27.25	-27.68					
26-Jul-2009	0:00:00	-1.01	-4.12	-6.66	-4.42	-2.75	-5.42		-3.09	-30.06	-27.73					
26-Jul-2009	6:00:00	-0.90	-4.33	-7.04	-4.76	-3.05	-5.94		-3.73	-32.61	-27.73					
26-Jul-2009	12:00:00	-1.56	-7.34	-10.08	-5.84	-4.13	-7.26		-4.68	-34.45	-27.78					
26-Jul-2009	18:00:00	-2.05	-9.51	-14.73	-6.83	-5.22	-8.92		-6.37	-35.82	-27.65					
27-Jul-2009	0:00:00	-2.27	-9.34	-15.92	-6.68	-5.46	-9.46		-7.72	-35.72	-27.60				0.33	
27-Jul-2009	6:00:00	-2.61	-9.25	-16.39	-6.86	-5.66	-10.21		-9.14	-35.74	-27.65					
27-Jul-2009	12:00:00	-3.71	-11.31	-17.88	-7.97	-6.55	-11.93		-11.65	-35.95	-27.80					
27-Jul-2009	18:00:00	-2.01	-4.99	-2.53	-4.60	-3.10	-6.47		-5.72	-31.80	-27.62					
28-Jul-2009	0:00:00	-2.03	-4.69	-1.40	-5.20	-3.68	-6.96		-7.23	-33.69	-27.56					
28-Jul-2009	6:00:00	-2.47	-5.42	-2.29	-5.91	-4.30	-7.60		-8.66	-34.63	-27.79					
28-Jul-2009	12:00:00	-3.23	-7.56	-4.15	-6.27	-5.09	-8.62		-10.54	-35.50	-27.65					
28-Jul-2009	18:00:00	-4.90	-10.44	-9.31	-7.36	-6.59	-10.72		-13.78	-35.70	-27.67					
29-Jul-2009	0:00:00	-5.27	-10.09	-10.68	-6.77	-6.84	-11.34		-15.08	-35.73	-27.55	1.25	1.60	7.85		
29-Jul-2009	6:00:00	-5.92	-10.27	-11.61	-7.09	-7.02	-12.41		-16.39	-35.86	-27.74					
29-Jul-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
29-Jul-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Jul-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Jul-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Jul-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Jul-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Jul-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Jul-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Jul-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Jul-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
1-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
1-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					

Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
1-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
1-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
2-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					1.48
2-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
2-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
2-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Aug-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Aug-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Aug-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Aug-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					











Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
3-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
3-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Oct-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Oct-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Oct-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Oct-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					











Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
4-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
4-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
5-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
6-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
7-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
8-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
9-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
10-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
11-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
12-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
13-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
14-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
15-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
16-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
16-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
16-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
16-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					



Date	Time	Water Level (inches)												On-site Manual Raingauge	On-site Auto RG Daily	On-site Auto Raingauge
dd-mmm-yyyy	hh:mm:ss	FLO AW1	FLO AW2	FLO AW3	FLO AW4	FLO AW5	FLO AW6	Ambient	FLO RAW1	FLO RAW2	FLO RAW3	CG1	CG2			
29-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
29-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
30-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Dec-2009	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Dec-2009	6:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Dec-2009	12:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					
31-Dec-2009	18:00:00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00					

# **APPENDIX D**

## **2009 Site Photos**



SPA1 – Minor scour on left bank @ station 9+75 (R1)



SPA2 – Erosion behind root wad @ station 12+75 (R1)



SPA3 – Erosion behind log vane @ station 33+75 (R2)



SPA4 – Scour around log weir @ station 46+50 (R3)



SPA5 – Heavy vegetation and scour behind bedded log structure @ station 49+30 (R3)



SPA6 – Erosion on right bank behind bedded log structure @ station 54+80 (R3)





SPA7 – Scour behind log vane @ station 55+50 (R3)



SPA8 – Erosion behind log vane @ station 74+50 (R3)



SPA9/SPA10 – Riffle downcut, erosion around rock weir @ station 74+90 (R3)



Log Vane (typical)



Log toe (typical)



Small woody debris bundle (typical)



Channel straight reach (typical)



Root wads (typical)



Pool section (typical)



Riffle section (typical)



Rock weir (typical)



Reach 4 channel (typical)



Wet employee (typical)

# **APPENDIX E**

## **Morphologic Parameters**



Parameter	Cross Section 1 Pool						Cross Section 2 Riffle						Cross Section 3 Pool						Cross Section 4 Riffle					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	16.8	16.9	17.2				16.4	19.0	20.4				19.3	18.8	18.8				22.4	19.9	20.3			
Floodprone Width (ft)	73.0	70.8	70.9				79.3	77.4	76.9				77.5	76.8	76.4				72.7	65.1	67.5			
BF Cross Sectional Area (ft <sup>2</sup> )	34.1	33.9	33.5				18.7	21.3	22.6				49.0	41.2	42.0				26.2	22.4	21.9			
BF Mean Depth (ft)	2.0	2.0	1.9				1.1	1.1	1.1				2.5	2.2	2.2				1.2	1.1	1.1			
BF Max Depth (ft)	3.8	3.7	3.7				2.4	2.5	2.5				4.9	4.8	4.6				2.9	2.6	2.5			
Width/Depth Ratio	8.3	8.4	8.9				14.5	17.0	18.4				7.6	8.6	8.5				19.2	17.6	18.8			
Entrenchment Ratio	4.3	3.0	4.1				4.8	4.1	3.8				4.0	4.1	4.1				3.2	3.3	3.3			
Wetted Perimeter(ft)	18.9	18.9	19.2				17.2	19.7	21.1				22.2	21.6	21.2				23.3	20.6	21.1			
Hydraulic radius (ft)	1.8	1.8	1.7				1.1	1.1	1.1				2.2	1.9	2.0				1.1	1.1	1.0			
Parameter	Cross Section 5 Riffle						Cross Section 6 Pool						Cross Section 7 Riffle						Cross Section 8 Pool					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	16.7	16.5	16.9				17.4	18.1	17.7				18.5	20.3	17.7				19.2	20.0	20.9			
Floodprone Width (ft)	69.4	66.2	65.9				69.0	66.9	61.3				62.2	61.1	57.6				60.2	60.0	59.4			
BF Cross Sectional Area (ft <sup>2</sup> )	16.4	15.8	15.4				28.8	29.7	29.7				16.7	19.3	17.3				26.0	26.4	27.6			
BF Mean Depth (ft)	1.0	1.0	0.9				1.7	1.6	1.7				0.9	0.9	1.0				1.4	1.3	1.3			
BF Max Depth (ft)	2.0	2.0	1.9				3.4	3.4	3.4				1.4	1.7	1.6				2.5	2.5	2.4			
Width/Depth Ratio	17.0	17.1	18.4				10.5	11.1	10.6				20.4	21.4	18.1				14.1	15.2	15.9			
Entrenchment Ratio	4.2	4.0	3.9				4.0	3.7	3.5				3.4	3.0	3.3				3.1	3.0	2.8			
Wetted Perimeter(ft)	17.2	17.0	17.3				19.0	19.7	19.3				18.9	21.2	18.7				20.2	20.9	22.0			
Hydraulic radius (ft)	1.0	0.9	0.9				1.5	1.5	1.5				0.9	0.9	0.9				1.3	1.3	1.3			
Parameter	Cross Section 9 Riffle						Cross Section 10 Pool						Cross Section 11 Riffle						Cross Section 12 Pool					
Dimension	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5	Base	MY1	MY2	MY3	MY4	MY5
BF Width (ft)	19.0	19.1	18.6				22.5	21.7	22.1				19.4	19.8	19.3				13.0	15.8	16.2			
Floodprone Width (ft)	66.1	66.0	66.0				80.5	80.2	80.6				77.9	74.8	68.8				78.7	76.7	76.1			
BF Cross Sectional Area (ft <sup>2</sup> )	32.7	29.5	29.0				40.1	40.1	41.1				21.5	24.1	23.6				25.7	27.4	28.8			
BF Mean Depth (ft)	1.7	1.5	1.6				1.8	1.8	1.9				1.1	1.2	1.2				2.0	1.7	1.8			
BF Max Depth (ft)	2.9	2.7	2.6				3.8	3.7	3.7				2.7	2.8	2.7				3.9	3.9	3.9			
Width/Depth Ratio	11.1	12.4	12.0				12.7	11.8	11.9				17.5	16.3	15.8				6.6	9.2	9.2			
Entrenchment Ratio	3.5	3.4	3.5				3.6	3.7	3.7				4.0	3.8	3.6				6.1	4.8	4.7			
Wetted Perimeter(ft)	20.1	20.1	19.6				24.2	23.8	24.2				20.5	20.6	20.1				15.3	17.7	18.1			
Hydraulic radius (ft)	1.6	1.5	1.5				1.7	1.7	1.7				1.1	1.2	1.2				1.7	1.5	1.6			





